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DOMINION BUREAU OF STATISTICS  
CANADA

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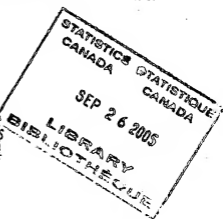
# SEVENTH CENSUS OF CANADA, 1931

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ADMINISTRATIVE REPORT OF THE DOMINION STATISTICIAN

*(Reprint from Volume I of the Report of the Census of Canada, 1931)*

Published by Authority of  
The Honourable H. H. Stevens, M.P., Minister of Trade and Commerce



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1934

Price, 50 cents.

# MAP OF THE DOMINION OF CANADA

EXCLUSIVE OF NORTHERN REGIONS

SHOWING  
DISTRIBUTION OF POPULATION  
CENSUS OF 1931

## LEGEND

NOTE:  
DOTS ARE OF TWO SIZES:  
EACH SMALL DOT REPRESENTS 1000 PEOPLE LIVING IN RURAL COMMUNITIES  
OR IN URBAN CENTRES OF LESS THAN 2000 PEOPLE;  
THE LARGER DOTS REPRESENT LOCALITIES WITH POPULATIONS OF FROM 2000-5000 PEOPLE.  
SIZES OF CIRCLES SHOW THE PROPORTIONATE POPULATIONS  
AS INDICATED BY SCALE OF TYPICAL CITIES SHOWN BELOW





# ADMINISTRATIVE REPORT ON THE SEVENTH CENSUS OF CANADA, 1931.

By The Dominion Statistician.

To The Honourable Henry A. Stevens, M.P.,  
Minister of Trade and Commerce.

## §1. Introductory

I have the honour to submit hereunder a report on the Census of Canada taken as of date June 1, 1931, being the Seventh Decennial Census of the country as a whole to be taken since the creation of the Dominion.

As there were censuses prior to Confederation at similar ten-year intervals back to 1851 of the United Provinces of Upper and Lower Canada, as well as of the Colonies of Nova Scotia and New Brunswick, there is now available a regular decennial series of such records for the provinces originally constituting the Dominion over a period of 80 years.<sup>(1)</sup>

Within the decade just passed, whose progress the Seventh Census measures in some of its most important features, economic conditions within the Dominion, as elsewhere, have been marked by violent fluctuations. In the earlier years, the subsidence of the post-war "boom" caused general inactivity. This was followed by a period of almost continuously mounting prosperity, which carried the current records of production, trade and finance to levels unprecedented in the previous history of Canada. With the break, however, which occurred in November, 1929, a decline of equally unprecedented rapidity and extent set in—and this was gathering momentum on the census date. Its accentuation since 1931 into the most acute and pervasive crisis of modern times has given additional impulse to economic discussion and has imparted special interest to the results of the present Census.

It is therefore more than usually incumbent to outline the scope and methods of the Census, and in succeeding chapters of Volume I of the Census Report to summarize its broad results, leaving the detailed analyses and cross-classifications of the statistics, together with their final interpretation, for succeeding volumes. Considered merely as an administrative task, and apart from the importance of its results, the census is one of the largest activities of the Government, both in the extent of the organization required for collecting the data, and in the magnitude of the operations involved in compiling, analysing and otherwise adapting these data to the manifold public and private uses for which they are designed.<sup>(2)</sup>

## §2. Census Legislation in Canada

"The Census and Statistics" is mentioned in the British North America Act, 1867 (Section 91, Subsection 6), as the sixth of twenty-eight subjects "exclusively assigned" to Dominion as distinguished from Provincial legislative authority. In accordance with this provision, a Census Act was passed by the Parliament of Canada in 1870 (33 Vict., c. 21). Modelled somewhat on the earlier Census Act of the United Provinces passed in 1841 (reenacted and amended in 1843 and 1847),<sup>(3)</sup> it was amended in various particulars in the years 1871 (34 Vict., c. 18) and 1879 (42 Vict.,

<sup>(1)</sup> There were numerous censuses in Canada prior to 1851. See §4 of the present Report (beginning p. 5), headed "Historical—Objects and Uses of the Census," and in particular the closing paragraphs (p. 10). An enumeration of all these censuses and of other population records, together with the total population shown by each, is given in Appendix I of Chapter I, Volume I of the Census Report.

<sup>(2)</sup> Of the United States Census, whose relative scope and extent is not unlike that of Canada, the Advisory Committee appointed by the United States Government in 1921 remarked: "Of all the peace-time activities of the Federal Government, taking and compiling the Census is the largest."

<sup>(3)</sup> The Constitutional Act dividing the province of Quebec into Upper and Lower Canada was passed in 1791 and at the second session of the first Parliament of Upper Canada an Act assented to (July 9, 1793) provided for "a true and complete list of every male and female inhabitant", the census list to be presented at the general quarter session in the month of April.

A second Act was passed on July 10, 1824: "An Act to repeal part of the second clause of an Act passed in the thirty-third year of his late Majesty's reign, . . . and to make more effectual provision for obtaining an accurate census of the population of this province". This Act provided that a "true and complete list of every male and female inhabitant" be delivered to the Clerk of the Peace for the district who in turn was obliged to make "a general return of the population of his district on or before the first day of June in each year."

In 1834 an amendment to the 1824 Act provided for the enumeration of the blind, deaf-mutes and insane, according to age, conjugal condition, etc. A further amendment was passed in 1838 providing for the inclusion of religious in the census. Under the Act of 1824 were taken the annual Censuses of 1824 to 1841.

c. 21). In 1905 the Act was consolidated with the General Statistics Act (R.S.C., 1886, c. 59) and the Criminal Statistics Act (1876, c. 13), when the Census and Statistics Office of Canada was made permanent. Again in 1918, a further and complete consolidation of statistical legislation was effected by the Act of that year "respecting the Dominion Bureau of Statistics," (8-9 George V, c. 43—short title, "The Statistics Act"), which created a central statistical organization whose duties were defined as "to collect, abstract, compile and publish statistical information relative to the commercial, industrial, social, economic and general activities and condition of the people, to collaborate with all other departments of the Government in the compilation and publication of statistical records of administration according to the regulations, and to take the Census of the Dominion."

It is under the latter instruction, and under the further sections of the Act which deal specifically with the Census of Population and Agriculture, that the Census of 1931 has been taken. The pertinent sections of the Act (Sections 3-8, 11-15, 16-19, and 36-41), are printed in Appendix I to this Report.

The first census of the Dominion was taken in 1871, and similar censuses have followed in every tenth year thereafter. In 1886, a special census of Manitoba and the Northwest Territories was taken midway between the decennial censuses, under authority of an Act passed in 1885 (48 Vict., c. 3). This "quinquennial" census was repeated for Manitoba in 1896, while in 1906 and again in 1916 and 1926 a similar census included also Saskatchewan and Alberta, which had been erected into provinces in 1905. Authority for the quinquennial censuses of Alberta and Saskatchewan was originally taken under the Alberta Act, 1905 (5 Ed. VII, c. 3), and the Saskatchewan Act, 1905 (5 Ed. VII, c. 42), respectively, which provide for censuses every fifth year from 1901, but an amendment to the Census and Statistics Act in 1905 (5 Ed. VII, c. 6) as repeated in the Statistics Act, 1918, declares that "a census of population and agriculture of the Provinces of Manitoba, Saskatchewan and Alberta shall be taken . . . on a date in the month of June in the year one thousand nine hundred and twenty-six . . . and every tenth year thereafter." (1)

The administration of the census was originally vested in the Ministry of Agriculture (31 Vict., 1868, c. 53, sec. 5). In 1912, however, the Census and Statistics Office, as established in 1905, was transferred to the Ministry of Trade and Commerce, to be merged subsequently in the Dominion Bureau of Statistics under the Statistics Act, 1918, under authority of which the various schedules and regulations of the Census of 1931 have proceeded.

### §3. Preliminary Reports of Census Results

While the present volume constitutes Volume I of the final Report of the Census of 1931, the more important counts and summary results have been issued to the public (following the practice adopted in 1921) as soon as they became available,—and certain whole sections of the present and forthcoming volumes have also been previously released as printed "bulletins". In brief, the policy adopted during the months following the date of the Census was to give out the more important population data for cities, towns, villages, etc., as soon as reasonable certainty was felt as to their accuracy. Later, as the compilations progressed, these materials were assembled by county and provincial areas, while additional bulletins summarized the results by rural and urban, conjugal condition, religions, origins, language, literacy, school attendance, birth-place, nationality, years of immigration, occupation, earnings, unemployment, households and dwellings. The preliminary census count for the whole of Canada became available on November

(1) A census of Manitoba was taken in 1870, and as it antedates all other enumerations in the Dominion, including the general Census of 1871, details concerning it are of interest. It was taken on instructions addressed on August 4, 1870, to the Lieutenant Governor by the Secretary of State of the Dominion, which provided that the enumeration should cover the half-breed heads of families and their children residing in the said province at the time of its acquisition, the object being to facilitate the transfer to them of certain lands. Clause 13 provided also for a report on the number of Indians. On October 13, 1870, the Lieutenant Governor reported that he had divided the province into five sections with one English and one French enumerator in each; later he forwarded a copy of the rules and regulations and of the census schedules. On December 9, he made a preliminary report of the results showing 11,945 people, including whites, half-breeds and Indians. Later the total was raised to 11,965, and still later to 12,228. The results of this census were used in dividing the province of Manitoba into the four original electoral districts.

30, 1931, compared with February 22, 1922, for the Census of 1921, although the task from the point of view of population increase alone was almost one-fifth greater in 1931 than in 1921.

A special bulletin showing population (male and female) by electoral districts, cities, towns, villages, townships and other local subdivisions was issued in 1932, with comparative figures for 1921, for the use of the Redistribution Committee of the House of Commons.

In regard to agriculture, releases given out within the four months following the census date covered the acreages sown to the principal crops for the current year in the respective provinces, these figures being of immediate importance in the estimating of 1931 crop conditions. They were followed during the autumn of 1931 by the statistics of live stock on farms as of June 1, 1931, by provinces. The figures of acreages (with yields) and live stock for 1930 followed, while later issues brought out both the 1931 and 1930 statistics by county or other local areas. Subsequent bulletins during 1932 and the early months of 1933 gave the more important figures of farm holdings, farm population, farm facilities, farm labour and its cost, numbers of occupied farms, vacant and abandoned farms, farm acreages, farm values, farm mortgage debt, farm tenure, farm expenses, and fruit and vegetable production. Altogether over 50 releases dealing with various features of the Census of Agriculture were given out within the 18 months following the census date—a degree of expedition not achieved in any previous census.

From the Census of Merchandising Establishments, which was taken by correspondence during the autumn of 1931 (as will be explained on a later page), preliminary reports dealt with retailing activities by leading cities and towns, by counties, by provinces, and for Canada as a whole, while wholesale activities were likewise summarized by provinces and leading centres. From the Census of Institutions (similarly attached in its initial stages to the Census of Population), three preliminary bulletins were issued during the early months of 1933, dealing respectively with Hospitals for the Insane, Penal Institutions, and Benevolent Institutions; to which was added a directory of General Hospitals. As the materials which these preliminary reports contained are incorporated in the present and succeeding volumes of the Census Report their more exact citation is unnecessary here.

#### §4. Historical—Objects and Uses of the Census<sup>(1)</sup>

Census-taking dates from the dawn of civilization. Moses numbered the Children of Israel in the fifteenth century B.C. (Exodus xxx, 11-16; Numbers i, 2-4 and 47-49; Numbers iii, 14-16; Numbers iv, 34-49). But enumerations of a similar character were known many centuries earlier: as in Babylonia (ca. 3800 B.C.); in China (ca. 3000 B.C.); and in Egypt (ca. 2200 B.C.; cf. Herodotus, Bk. II, c. cxix; Bk. III, c. lxxxix-xc). A census taken by King David in 1017 B.C. achieved an evil notoriety in history from the divine wrath which it is recorded as having provoked (II Samuel xxiv, 1-25; I Chronicles xxi, 1-27) and which was cited for many centuries in Europe in warning against the spirit of inquiry; as late as 1753 the taking of a census was condemned on religious grounds in the British House of Commons. The census was one of the institutions founded by Solon at Athens in the sixth century, B.C. The Romans were assiduous census-takers, both under the Kings, the Republic and the Empire; Julius Caesar reformed the census. The Breviary of Charlemagne (A.D. 808) and the Domesday Book of William the Conqueror (A.D. 1086) are celebrated mediæval censuses. Later, for several centuries, the census disappeared from Europe.

From the census of ancient times, however, the census of today is far removed in character and purpose. Originally no more than a means of mustering the fighting men of the nation for foreign wars, or of enabling rulers to levy taxes on their subjects, or of determining political status, (the Hebrew, Greek and Roman censuses, as well as those of mediæval Europe, were at bottom of that character), the census has so far passed from this conception that its use for any such purpose is now expressly forbidden. Broad sociological inquiry,—scientific interest in the general problems of population of a kind unknown until the seventeenth century,—rather than specific reference to the individual, is now its essential objective; absolute secrecy as to the individual is imperatively enjoined upon the census.

<sup>(1)</sup> The materials in the present and next following sections are repeated with only minor alterations from the Report on the Census of 1921, Vol. I, pp. iv-vi.

In Canada the immediate, legal *raison d'être* of the census is to determine representation in the Dominion House of Commons. Under the British North America Act, the province of Quebec is given a fixed number of seats, namely, sixty-five, (the number held by Lower Canada in the Canadian Legislature prior to Confederation), while the number assigned to the other provinces is *pro rata* on a population basis as determined by the census. The first rearrangement, it was provided, should be made on the completion of the Census of 1871, a similar readjustment to follow every subsequent decennial census. The Canadian Census is thus taken primarily to enable a redistribution bill to be passed through Parliament. The application of the census to this problem, and the results of the 1931 Census upon existing Parliamentary representation, are dealt with in detail in a later section of this Report. (See pages 65-69.)

But the census, as above remarked, has far wider uses than to fix electoral representation, important as that purpose is. It constitutes, in fact, under the modern system, nothing less than the periodical stock-taking of the people—their composition and condition—designed to show from the widest possible angle the stage that has been reached in the evolution of the national life. Fundamentally, the importance of the census hinges upon its enumeration and analysis of the human element—the people themselves—the primary asset of every state. Their numbers, local distribution, age, sex, conjugal condition, racial origin, nationality, language, religion, education, occupation, infirmities, housing conditions, etc., etc., are each facts in themselves of the greatest moment, especially when analysed in conjunction with one another and against the background of history and natural environment. The data on these various points form a standard by which almost all other facts relating to the country must be measured if they are to have real significance; the well-being of the state, physical, moral and economic, including such important phases as the birth and death rates, criminality, production, trade, wealth, can be apprehended and interpreted only through the medium of population statistics. Thus the census rounds out and completes the scheme of information by which the government as by a chart directs the affairs of the nation. Without the census, it would be true to say that legislation and administration must be carried on in the dark—that there would be no means of knowing whether the country was on the road to success or disaster, or what constitutes the norm or standard of its progress in almost any particular. So cogently is this felt that censuses at five-year intervals instead of ten are universally advocated and would undoubtedly be adopted but for their cost. France, Germany, New Zealand, Denmark have in fact quinquennial censuses; Canada likewise, as already explained, has had a quinquennial census for the three Prairie Provinces since their period of expansion began.

In view of the above, and before proceeding to describe the scope and methods of the Census of 1931, it is worthy of remark that the credit of being the first to take a census of population in the modern meaning of the term belongs to the colony of New France, which in 1666 conducted a "nominal" or name by name enumeration of the people, on the *de jure* principle, of a fixed date, showing age, sex, occupation and conjugal condition. A total of 3,215 persons was recorded; a supplementary inquiry a year later covered areas under cultivation and the numbers of cattle and sheep. The idea of the Census of 1666 appears to have originated with Colbert, but it was vigorously taken up by Talon, the great Intendant, who himself carried out a considerable part of the first enumeration, "visiting from door to door all the habitations of Mont Réal, Trois-Rivières, Cap-de-la-Madeleine, and all places above Québec." (A photograph of three of the original sheets, partly in Talon's handwriting, now in the Archives of Paris, is reproduced on the following pages). In Europe the first censuses, those of Prussia and Sweden, date only from 1719 and 1748, respectively, Denmark, Norway and Spain following in 1769, whereas in France and England the first censuses date only from 1801, while in the United States no general census was taken before 1790, when it was a "family" and not a "nominal" enumeration and when its *raison d'être* lay less in the spirit of scientific inquiry than in the practical problems of electoral representation. The primitive St. Lawrence colony may therefore claim to have instituted what is today one of the principal instruments of public administration in every civilized community.<sup>(1)</sup> Perhaps two-thirds of the earth's population is now brought periodically under review by the census.

<sup>(1)</sup> See the article by A. J. Pelletier, Assistant Chief, Census Branch, Dominion Bureau of Statistics, on "Canadian Censuses of the Seventeenth Century" in the Proceedings of the Canadian Political Science Association for 1930. The development of census-taking in the Nineteenth Century is succinctly treated by Wilcox, article "Census" in the Encyclopaedia of the Social Sciences, 1930.

Canada  
1666

1666

Noms et surnoms d'ages qualitez et mistieres  
de tous les personnes qui sont de la banlieue  
de la ville de Quebec y compris la grande allée



Le premier

Le Sieur du Seminaire de Quebec  
Le Sieur Dominique

Monsieur Francoeur de Laroc.	Lequel de ces noms est le Ruy premier laque de ce pays
Monsieur de Berniere . . . .	bon et vaillant homme de f
Monsieur de Charny . . . .	bon et vaillant homme de f
Monsieur de Maisonneuve . . . .	bon et vaillant homme de f
Monsieur de Duroy . . . .	bon et vaillant homme de f
Monsieur de Pomme . . . .	bon et vaillant homme de f
Monsieur de Noe . . . .	bon et vaillant homme de f
Monsieur de Morin . . . .	bon et vaillant homme de f
Monsieur de Joliffe . . . .	bon et vaillant homme de f

The above is a reproduction in part of the first sheet of the Census of 1666 (See Can. Arch. Series G. 1, Vol. 460-1).

familles des habitans . . . . .	âges	qualité & profession
Duval Massimuni . . . . .	34	habitant
Magd. Laine Manicé . . . . .	32	sa femme.
Pierre du Rocher . . . . .	29	habitant
Catherine Rince . . . . .	20	sa femme
Samuel Dupont . . . . .	29	ouvrier
Suzanne Gauthier . . . . .	27	sa femme.
Samuel Dupont . . . . .	2	fil
Jean Zolletier . . . . .	34	habitant
Anne Zolletier . . . . .	24	sa femme
Noël Zolletier . . . . .	11	fil
Anne Zolletier . . . . .	10	fil
René Zolletier . . . . .	9	fil
Jean Zolletier . . . . .	3	fil
Leone fille quinqué Enore baptisé . . . . .	3 jours	fil
Et Guillaume Lemaire . . . . .	17.	bonnetier au moulin
Jean Fournier . . . . .	40	habitant, menuisier
Simone de Rigroux . . . . .	21	sa femme
Jean Fournier . . . . .	3	fil
Armand Fournier . . . . .	2	fil
Jean Roux . . . . .	30	habitant
Mari Roux . . . . .	25	sa femme
St Mari Anne Roux . . . . .	6 mois	fil

## Cap Rouge et Côte de St Ignace

Familles	Âges	Gens au vu	Terres en valeur
Jean Lemire Indic	41	5	10
Louise marbelle sa femme	27		
5 Enfants			
Jeune Elizabeth	9		
Marie	7		
Joseph	5		
Anne	3		
Louise	6 mois		
3 Domestiques			
Pierre guelin	22		
Mathieu Chénault	30		
Jean gauthier	20		
Jacques Le Gout	21		
anne gauthier sa femme	32		
Louise de Gosselin	50		
4 Enfants			
Pierre monica	17		
Jacques monica	12		
Catherine	7 1/2		
Jean	5		
Denis Joseph Ruette et sa femme			
et de monicaux	50	18	100
un enfant			
François Magdelaine Ruette et sa femme	10		
monicaux	9		

The initial Canadian Census of 1666 was repeated no fewer than thirty-six times during the French *régime* (namely, in the following years: 1667, 1668, 1673, 1675, 1676, 1679, 1680, 1681, 1683, 1685, 1686, 1688, 1692, 1695, 1698, 1706, 1707, 1712, 1713, 1714, 1716, 1718, 1719, 1720, 1721, 1722, 1723, 1724, 1726, 1727, 1730, 1732, 1734, 1736, 1737, 1739).

In addition nine partial censuses were taken. In the later years of this period, ten similar censuses together with nine partial censuses of *Peninsule Acadienne* (Nova Scotia Peninsula), and ten complete and six partial censuses of *Isle Royale* (Cape Breton Island), twenty-one complete and four partial censuses of Newfoundland, four of *St. John River* (New Brunswick), and seven of *St. John Island* (Prince Edward Island), were taken, (several of these being under British authority since Acadie and Newfoundland were finally ceded in 1713). In addition, thirty-four "statements of population" relating to New France (being for the most part estimates based on local authority) are available for the period 1608-1763, together with six for Newfoundland, twelve for Acadie, four for *Isle Royale* (Cape Breton), six for *St. John Island*, and five for *St. John River* (New Brunswick). There were also censuses for Louisiana, Arkansas, Detroit, *St. Pierre* and *Miquelon*. With regard to Indians, an estimate for the territory now comprised in Nova Scotia, New Brunswick, the State of Maine, parts of other New England States, and the Lower *St. Lawrence Valley*, was made as early as 1611 (by a Jesuit missionary), while a so-called "census" of the aboriginal "warrior" population was taken in 1736 (by an officer, unnamed, of the French Government) and in 1763 (by Sir William Johnston).

From the date of the British occupation, a series of less elaborate reports by Colonial Governors supervened, though the Census eventually reappeared at irregular intervals. There was a census of Canada in 1765, and others followed in 1784 and 1790. Censuses of New Brunswick, Nova Scotia, Lower Canada and Upper Canada became more or less frequent after 1817, the census of Upper Canada (now Ontario) being annual from 1824 to 1842. For Lower Canada there were censuses in 1825, 1827, 1829, 1831, 1832, 1842 and 1844. Censuses of the *Assiniboine* and *Red River District* (Manitoba) were taken in 1814, 1822, 1831, 1832, 1833, 1834, 1835, 1838, 1840, 1843, 1846, 1849 and 1856. The scope of these inquiries varied widely, but after 1827 they became fairly inclusive. Under the Canadian Census Act (that of the United Provinces) as amended in 1847, a general census was taken in the months of February and March, 1848, to be repeated in the same months in the year 1850. On August 30, 1851, Royal Assent was given to an Act to provide more effectually for taking a periodical census of the province, as follows: "Whereas it is expedient that the census of this province should be taken in the year one thousand eight hundred and fifty-two, then in the year one thousand eight hundred and sixty-one, and thereafter in every tenth year, and that better provision should be made for taking the said census." Under this Act were carried out the Censuses of 1851-52 and 1861, censuses of Nova Scotia and New Brunswick being taken in the same years, so that as stated in the opening paragraphs of this report we may regard the present decennial census as dating from 1851.

An account of these early censuses was published in Volume IV of the Report of the Census of 1871—the first census after Confederation—which was designed to start the new Dominion upon its career with a review of all the more important previous statistics relating to its domain. This account has been very considerably enlarged by researches made by the Bureau of Statistics in connection with the 1931 Census, and both the old and new materials are summarised in the present Volume I of the Census Report, the figures thus derived being extensively drawn upon and analysed in Chapter I of Vol. I, which deals with the growth of the Canadian population from the earliest times, and which marshalls the totals of the Census of 1931 against the background of all previous censuses, in an endeavour to establish the principles governing the expansion shown. In Appendix I to the same chapter will be found a chronological table containing a statement of all census and other population estimates of which record has thus far been obtained (together with the total count in each case) many of these being new or revised, while in Appendix II to the same chapter, a comprehensive bibliography is given of all discovered "sources" relating to population and other census materials in Canada.

## §5. The Census Date—De Jure Character of the Census

As in 1921, the date selected for the 1931 Census was June 1, the Statistics Act requiring (Section 16) that the Census of Canada be taken "on a date in the month of June." Previous to

1911, the Canadian Census was taken in April, the change to June being made in order to avoid the unfavourable weather and road conditions of the earlier month, which seriously retarded enumeration in the extensive thinly-populated areas which the Canadian Census must cover. The June date has the further advantage of enabling the acreages sown to the more important crops for the current year to be ascertained with a degree of finality impossible in April. The date was thrown back as early as possible in June in order to anticipate the movement of the people to summer resorts.<sup>(1)</sup>

**The De Jure Method.**—The census date is of a certain significance in view of an important fact, namely, that the Census of Canada is taken on the *de jure* as distinguished from the *de facto* principle, i.e., each person is enumerated as belonging to the locality in which he or she is regularly domiciled, whereas under the *de facto* principle the individual is assigned to the locality where found on the census date. The *de jure* procedure is necessitated by the requirement as to parliamentary representation which has been previously described as the legal *raison d'être* of the Canadian Census; the system of provincial subsidies is also authorized on a *per capita* basis by the British North America Act and other constitutional legislation. Theoretically as well, the *de jure* is the preferable method (notwithstanding the greater simplicity of the *de facto* method and the considerable extra labour involved in earmarking non-permanent residents and conversely in tracing and assigning absentees on the census date) owing to the constantly increasing need for normal population data in the study of housing, public health, local transportation needs, municipal status, and similar social problems. It may be said in general that the trend of practice is towards the *de jure* system; Great Britain while retaining *de facto* enumeration for purposes of comparison has now combined with it a record *de jure*. As a detail, non-resident students and the inmates of hospitals are in Canada excluded from the population of localities where found and assigned to the localities of home residence, but inmates of prisons and gaols are counted where found. The personnel of the Canadian navy and of fisheries protection vessels, which in 1921 was recorded separately, was in 1931 assigned to localities of home residence, the commanders of ships acting as enumerators.

<sup>(1)</sup> Census dates vary in different countries, being dictated to a degree by local requirements. In the United States the date of June 1 prevailed prior to 1910, when it was changed to April 1; the latter was changed to January 1, in 1920, in order to meet the difficulty involved in migration from the cities. In 1930, however, reversion to April 1 was made, owing to the difficulties of winter travel and disturbance of continuity in the census records engendered by the January date. At the British Empire Statistical Conference, 1920, the recommendation was made that the range of variation in respect of census dates should be limited to a period of two months before or after April 15. The dates of important recent censuses in the British Empire are as follows: The United Kingdom including Scotland, April 25-27, 1931; the Irish Free State, April 18, 1926; South Africa, May 5, 1931; New Zealand, April 20, 1926; India, February 26, 1931; Southern Rhodesia, May 5, 1931; Hong Kong, March 7, 1931. In Australia the 1931 Census was postponed to 1933 (July 1).

In other countries recent census dates are as follows:—

#### LATEST CENSUS DATES FOR CERTAIN FOREIGN COUNTRIES

Country	Dates	Country	Dates
Belgium.....	December 31, 1930	Luxemburg.....	December 31, 1930
Bulgaria.....	December 31, 1926	Mexico.....	May 15, 1930
Chile.....	November 26-27, 1930	Netherlands.....	October 7, 1930
Colombia.....	November 16, 1928	Norway.....	December 1, 1930
Czechoslovakia.....	May 4, 1927	Poland.....	December 9, 1931
Denmark.....	November 5, 1930	Portugal.....	December 1, 1930
Egypt.....	February 18-19, 1927	Roumania.....	December 29, 1930
Finland.....	December 31, 1930	Siam.....	July 15, 1929
France.....	March 8, 1931	Spain.....	December 31, 1930
Germany.....	June 16, 1933	Sweden.....	December 31, 1930
Greece.....	May 15-16, 1928	Switzerland.....	December 1, 1930
Honduras.....	June 29, 1930	Turkey.....	October 28, 1927
Hungary.....	December 31, 1930		(First General Census taken)
Italy.....	April 21, 1931	United States.....	April 1, 1930
Japan.....	October 1, 1930	U.S.S.R. (Soviet Russia).....	December 17, 1926
Latvia.....	February 11, 1930	Yugoslavia.....	September 29, 1926

## §6. Scope of the Canadian Census

As will be seen from a reference to the Statistics Act, 1918, (quoted in Appendix I to this introduction) the Decennial Census of Canada is primarily a census of Population and Agriculture; to this is added a census of specified Institutions, together with "such other matters as may be prescribed by the Governor in Council." Previous to this legislation, the defined scope of the Canadian Census was more inclusive, embracing a census of industrial production (mines, fisheries, forestry and manufactures), and of deaths occurring in the census year. This abandonment of the industrial and mortuary features, and consequent narrowing of the field of the census, had its explanation in a phase of statistical policy and organization to which a reference may be of interest.

It will be appreciated that for so far-flung a task as the enumeration and description unit by unit of the entire population of the country, a very large and expensive organization is required, especially in a country like Canada whose physical extent is that of half a continent and where large areas are still but sparsely settled. There is an obvious necessity, therefore, that such organization once brought into being should collect the maximum in the way of statistical materials—in other words should earn the largest possible "dividend" upon its "overhead." Reaching as it does every man, woman and child in the community, the census, it was felt, afforded an opportunity of dealing, not only with the people themselves and their personal and social characteristics, which was its immediate purpose, but with their various economic activities as well. Particularly did this apply in Canada where direct administration of many economic activities is under control of the Provincial Governments whose methods differ *inter se*. Though Dominion-wide statistics were in process of time established in certain fields and subjects, the census as originally conceived was given a wide range and mandate as to the materials it should collect, constituting as it did, in the early decades of the Confederation, the only means of obtaining a nation-wide purview of affairs.

But it is none the less clear that for certain inquiries of this nature the census is essentially unsuited. At bottom its form of organization is determined by the necessity of reaching each and every individual for the ascertaining of a series of fundamental, well-known facts—such as sex, age, conjugal condition, occupation, birthplace, nationality, etc. For this a very large staff must be engaged, for whom by implication the scale of remuneration must be moderate, thus excluding the employment to any general extent of specially trained or expert enumerators, or their retention for more than a comparatively short time. The census questions on population must be such as any person of fair education, after careful study of the regulations supplemented by oral instructions and a test designed to ensure his comprehension of details, can explain to the people,—and this is all the Canadian Census can reasonably hope to secure.

When, therefore, the census inquiry is extended beyond population, difficulty is at once encountered. Industrial production, for example, is so many-sided and complicated in its processes, requiring for its proper description scores of highly differentiated schedules, some of them complex and technical to a degree that no body of employees appointed and instructed as are the Canadian census enumerators can be expected to deal with successfully. Again, in the case of the statistics of deaths, only a qualified physician can furnish many of the details whose authenticity must be assured. In point of fact the so-called "mortuary" census, once a recurrent feature of the Decennial Census of Canada, had from the beginning proved of little value. In general, the census is primarily a "stock-taking" i.e., a record of conditions as they exist at a given moment; it cannot therefore be used beyond a point to record phenomena that require expert observation or notation over a period of time. Most economic phenomena, such as trade, finance, production, as well as social phenomena like births and deaths, migration, etc., fall in the latter category.

The centralization of the statistical work of the Government under the Dominion Bureau of Statistics in 1918, and the organization which the Bureau has since carried out in collaboration with the various Dominion and Provincial departments interested in different aspects of the social and economic situation, has enabled this feature to be dealt with more satisfactorily than was previously the case, to the considerable simplification of the census. The statistics of industrial production once included in the decennial census have been placed on an annual basis

(decennial records in such a field are of decidedly limited value), and are now collected in co-operation with the various Departments (Dominion and Provincial) of Mines, Forestry, Fisheries and Agriculture, the work having been co-ordinated not only as between Provinces in each subject but as between subject and subject, at the same time that it has been enlarged into a general economic survey by the inclusion of statistics with regard to labour, capital, power, etc., as well as production. In the case of education, annual statistics are now published on a Dominion-wide basis by the Bureau, in collaboration for the most part with the several Provincial Departments of Education, the census questions being limited to points required as background or check to the annual survey. Even more important from the standpoint of the Census of Population, the statistics of births, deaths and marriages are now compiled and published annually by the Bureau, the Provinces having enacted a uniform "model" Registration Act, using uniform schedules supplied by the Bureau for the collection of the data, and furnishing to the Bureau a copy of each registration at the cost of transcription. At the same time the statistics of immigration collected by the Dominion Department of Immigration have been brought into co-ordination and harmony as to method throughout. There is thus available for Canada a comprehensive body of population data, planned as a unity, including (1) the day to day movement of the population as revealed by (a) births and deaths and (b) migration; and (2) the periodical census or stock sheet of the whole. In brief, the decennial census is now related to the general body of Canadian statistics in a complementary and supplementary way that was not previously possible.

As an example of the "interlocking" of the census with the other records of population just mentioned, reference may be made to the well-known problem of the statistical treatment of fertility, which is sometimes dealt with by securing on the census schedule the number of children born to each married woman. It was decided to omit this question from the Canadian Census, since through the standard registration forms now in use throughout Canada, information is already obtained as to the number of children born alive to each mother, the number now living and the number that were stillborn. In addition, the Canadian birth forms contain detailed information concerning the parents, allowing classification under various rubrics, and comparison with the corresponding census figures of population; thus the forms distinguish births to married mothers from those to unmarried mothers, and give the age, birthplace and racial origin of the mother, and in the case of legitimate births, the age, birthplace, origin and occupation of the father. As the vital statistical compilations are made centrally in the Bureau of Statistics, the analysis of these results can be made as desired,—and this procedure has the advantage of maintaining a continuous record. On the other hand, the census is superior in including infertile marriages and in obtaining the information from women whose fertility is completed as well as those who are still in the child-bearing stage of life; moreover, the date or duration of marriage is not contained on the birth forms of all the provinces. Upon the whole, however, it appeared that the data available from the birth forms for the study of Canadian fertility were so considerable that the inclusion in the census of questions upon the subject could not be justified in view of the urgent need of restricting the schedule as much as possible. This problem is more fully dealt with in the special study of fertility which, as explained later, will appear in one of the census volumes.

In one case what might appear an exception to the principle above mentioned of excluding production statistics from the census is made, namely, in the case of the important industry of agriculture. More than one-third of the population of Canada is directly dependent upon agriculture, and the most extensive and expensive part of the census organization is that which covers the rural districts. For agriculture, moreover, the ordinary population enumerator proves a satisfactory field agent, most agricultural processes being familiar to an enumerator chosen from an agricultural district. Hence the Decennial Census of Canada has been made, under the Act of 1918, a census of Population and of Agriculture—a comprehensive survey of the Canadian people and of their basic industry—the latter being covered between censuses by a system of annual agricultural statistics and crop estimates which the Bureau carries out in co-operation with the nine Provincial Departments of Agriculture.

Under Subsection (c) of Section 19 of the Statistics Act 1918, (see Appendix I), a census of Institutions, including Hospitals, Hospitals for the Insane, Penal Institutions and Benevolent Institutions, (the latter including Houses of Refuge, Almshouses, Organizations for the Deaf,

Dumb and Blind, Child Welfare Institutions, Day Nurseries, etc.) in 1931 was taken simultaneously with the census of Population and Agriculture, while under Section (d) a census of Merchandising and Service Establishments was similarly taken. The population and agriculture enumerators, however, were employed in both these inquiries only to the extent of collecting the names, addresses and other primary facts of such institutions and establishments, the full data being subsequently secured by correspondence on schedules forwarded from the Bureau direct.

## §7. Method of Conducting the Enumeration—Secrecy

The original entries of the census for each person are made by the census enumerator, who personally visits each household for that purpose. In Great Britain, Australia, New Zealand and South Africa the householder is held primarily responsible for filling in the desired particulars, a schedule being left in advance of the census and subsequently collected. In France, Germany, Belgium and Italy, an individual card, being a modification of the householder's schedule, is employed. The schedule or card method, either singly or in combination, has undoubted advantages in thickly populated and well organized areas. It is less practical in countries like Canada, the United States and India, where great distances have in some cases to be traversed in taking the census, where permanent supervisory organization is less available, and where personal explanations of a kind that only a specially instructed enumerator can supply have been found indispensable over considerable sections.

**Secrecy.**—The answers given by the individual to census questions are in every instance held absolutely confidential. Every employee of the census, whether in the field, as commissioner or enumerator, or at Ottawa as compiler, clerk, etc., is bound by special oath and penalty against divulging any fact whatsoever that may have been learned through the census. The Bureau of Statistics is forbidden to issue any statement that would directly or indirectly reveal information pertaining to a particular person or concern—in other words it is limited to the publication of aggregates. (Statistics Act, 1918, Sections 6, 15 and 36). Though the name of every one is taken down, this is not for the purpose of associating the individual with any of the facts that are recorded, but is for use merely as a check on the accuracy of the enumeration,—to clear up such points as the completeness of the census in a given locality or the correctness of a particular return. (1) A special regulation supplements the sections of the Act above referred to and renders them still more explicit. (2)

(1) Under the Old Age Pensions Act, 1927 (R.S.C. 1927, c. 156) the pension authorities are given the right to ascertain the age of any pensioner free of charge:

- (a) from the Registrar of Vital Statistics of any province; or
- (b) subject to regulations, from any census taken more than 30 years before the date of application.

The regulations issued in this connection provide that the census shall be appealed to only in the event of failure to obtain information from

- (a) a certificate of birth;
- (b) a certificate of baptism; or
- (c) entries in a family Bible or genealogical record of memorandum of the family of the pensioner.

Further, the request for census information by the pension authorities can be made only with the consent in writing of the person regarding whom the information is required; the specific locality of residence must be stated; and any information supplied by the Bureau must be confidential and must not be used for any other purpose than that of the administration of the Old Age Pensions Act.

(2) Regulation No. 31 reads as follows:

**"SECRECY OF CENSUS INFORMATION PROVIDED FOR.**—Every officer or other person employed as census commissioner, census enumerator, or in any other capacity under the Statistics Act is required to keep inviolate the secrecy of the information gathered from the public and entered on the schedules or forms. An enumerator is not permitted to show his schedules to any other person, nor to make or keep a copy of them, nor to answer any questions respecting their contents, directly or indirectly; and the same obligation of secrecy is imposed upon commissioners and other officers or employees of the outside service, as well as upon every officer, clerk or other employee of the Dominion Bureau of Statistics at Ottawa. The custody of census and other statistical records pertains solely to the Bureau, the Act expressly stating that no individual report or return shall be published or divulged. Moreover, no officer or employee of the Bureau is permitted to make a search among the records for information relating to an individual return, except for purposes of verification under the Act. The facts and statistics of the census may not be used except for statistical compilations."

## §8. The Population Census, 1931

We may now proceed to a detailed description of the questions asked by the Census of 1931, which as previously stated comprehended the four subjects of population, agriculture, institutions and merchandising. The text of the various schedules used is reproduced in Appendix II (pages 74 and on).

It must be confessed that in Canada public interest in the census has been hitherto much less fertile of suggestions than in many other countries. In Great Britain and the United States the census offices in framing their schedules and regulations had the assistance of advisory committees nominated respectively by the Royal Statistical Society of Great Britain, and by the American Statistical and Economic Associations. The general similarity of conditions in Canada has rendered the recommendations of these committees of material value to the Dominion Bureau of Statistics. The opportunity afforded by the Imperial Statistical Conference of 1920 of direct consultations between the several parts of the British Empire was not again forthcoming; but the presence in Ottawa of various statistical officers of the Dominions in connection with the Economic Conference of 1930 enabled plans to be concerted for the early exchange of the census tabulation programmes between the countries of the Empire so as to permit a degree of mutual accommodation and co-ordination.

No question is of course inserted in the census except after the most careful deliberation, and as a rule in concurrence with expert opinion, of which there is now a considerable body extant. (1) Certainly no question is asked for the mere gratification of curiosity, or from which no result of real importance to the country will accrue. Census-taking, of course, is still in process of development, and finality or perfection cannot be claimed for any of its methods,—the more so as the conditions it must meet are constantly changing. In view, however, of the extent to which the success of a census depends upon the active co-operation of all the people—its openness to misunderstanding and the embarrassment that unthinking criticism may inflict—it may be permitted to preface the following review of the census schedules by emphasizing the care devoted to the planning of their many details. It may be noted in this connection that a statement of the purpose of each census question and of the procedure to be followed by the enumerator in securing the proper reply to each, was issued prior to the Census of 1931 in a booklet of 99 pages, intended primarily for purposes of instruction to the census commissioners and enumerators, and approved by Order in Council (P.C. 25) dated January 8, 1931.

## §9. The Population Schedule

The first and basic schedule of the census is that on which the details as to each person are entered. Supplementing this and exactly reproducing its questions, a so-called "individual" form is used in the case of persons absent for the day at the time of the enumerator's visit—this form being subsequently called for by the enumerator. Again, a special schedule for the enumeration of the blind and deaf-mutes is used, its purpose being to facilitate immediate compilation on behalf of educational and other institutions. Incidentally, blindness, total deafness, and deaf-mutism are the only "infirmities" recorded on the general population schedule, in view of the difficulty of securing accurate replies on such points as feeble-mindedness, idiocy, etc., though inmates of hospitals for the insane, feeble-minded, etc., are, of course, enumerated.

**Closed House and Absentee Family Cards.**—The *de jure* system of enumeration involves special procedure in respect to houses found closed, and in respect to individuals or families found in localities other than their permanent residence. In addition to the main census schedules, therefore, the enumerators are supplied with cards termed the "closed house" card and the "absentee family" card respectively (reproduced in Appendix II). An enumerator on finding a closed dwelling makes a return of the fact on the closed house card, obtaining the information from neighbours or others in a position to supply it. The details for non-residents and visitors

(1) Of special importance is the question, what subjects or features in connection with Population require the full enumeration of a census and what may be equally well or better treated by the sampling method? On this point see an article on "Enumeration and Sampling in the Field of the Census," with special reference to Canada, by R. H. Coats and M. C. MacLean, Chief of Census Analysis, Dominion Bureau of Statistics, in the *Journal of the American Statistical Association*, September, 1931.

are similarly entered on the absentee card and forwarded to the Bureau of Statistics. The two sets of cards are first "matched" in the Bureau, and the assignment of the individuals as to locality made in so far as possible; where a closed house card is received with no corresponding absentee reported, or *vice versa*, the matter is cleared up by subsequent inquiry. The absentee card as previously stated is not used in the case of persons absent for the day only; such cases are dealt with on the "individual" form above-mentioned.

### §10. Questions on the Population Schedule

The questions on the Population Schedule employed in the Census of 1931 numbered 40 in all, which may be very roughly segregated into groups as follows:—

- (1) Order of visitation, name, locality, description of dwelling;
- (2) Personal description (family, sex, conjugal condition, age);
- (3) Political status (birthplace, year of immigration, year of naturalization, nationality, origin, language);
- (4) Social condition (literacy, school attendance, religion);
- (5) Economic condition (occupation, industry, earnings, unemployment, disability).

In the case of the questions segregated under (1) and (2) above, no change was made from the practice followed in 1921, except for the addition under (1) of the question "Has this family a radio?"—the object being to measure exactly and from all significant angles the use in Canada of this important invention. In Group (4), likewise no change of moment was made. In the case of Category (3), roughly described as involving the "political status" of the individual, while no new questions were introduced, recent developments have considerably increased the demand for exact information as to Canadian nationality and have thrown a correspondingly heavier burden upon census compilations; an enlargement in the instructions to enumerators was accordingly made. Again, under Category (5), the unprecedented extent of unemployment, made it necessary to assign nine rubrics to the subject instead of three as in 1921 (the additional questions being devoted to causes), and to arrange for an extensive cross-analysis with the other pertinent questions on the schedule. It will be desirable, therefore, to discuss in some detail the manner in which the Census of 1931 approached these two series of problems, and the additional contribution which it has endeavoured to make to the understanding of each.

### §11. National Status and Cognate Subjects in the Census

The national status of Canada has been in the forefront of political discussion since the Great War, more especially since the Imperial Conference of 1926, when Canada and the other Dominions were explicitly recognized as (to quote the Report of the Conference) "autonomous communities within the British Empire, equal in status, in no way subordinate one to another in any aspect of their domestic or foreign affairs, though united by a common allegiance to the Crown, and freely associated as members of the British Commonwealth of Nations." As a by-product of this discussion, the question has been asked, how are Canadian Nationality and concomitant phenomena to be recorded by the census? who are "Canadians"? how do they "qualify" as such? and what is their exact number? Some confusion has characterized certain phases of the discussion, for the subject is many-sided and the "approach" of the census is multiple as well as direct. <sup>(1)</sup>

**Birthplace or Nativity.**—The census begins its inquiries on political status with the subject of birthplace or nativity: each and every person is asked to state the country where he or she was born. In enumerating the Canadian-born, the province of birth is also obtained, as

<sup>(1)</sup> On the occasion of the Census of 1921, currency was given in the press to statements that the census did not record persons of native-born Canadian parentage as "Canadians." This misunderstanding arose in part from the fact that the answer "Canadian" was not accepted in reply to the census question on racial origin, and in part from confusion as to the distinction existing between the concepts of birthplace, nationality or citizenship, and origin. As embarrassment was thereby caused to the 1921 enumeration in certain sections, the census procedure was explained in the press, and little or no difficulty on the point was encountered in 1931. The matter was the subject of a debate in the House of Commons on April 6, 1927.

throwing light on the movement of Canadians within their own boundaries,—for example, the extent to which the West has been peopled from the older provinces. In the case of countries whose boundaries were altered by the War, the province or city is obtained in order to make allocation in the census reports precise; by the Treaty of Versailles, persons born in, say, Warsaw, or in any part of what was formerly Germany, Russia or Austro-Hungary that is now Poland, are now to be regarded as having been born in Poland.

Thus in tabulating the results of this question, the following broad classifications are obtained: (1) those who are Canadians by birth, with the province of birth; (2) those who are of "other British" birth (these being fellow "British subjects" unless they have renounced their British allegiance); and (3) the "foreign-born" according to countries, who may or may not have become Canadian nationals and British subjects.

In two further questions under the heading of birthplace or nativity, the birthplace of the father and of the mother, respectively, of each person is obtained. These questions throw light on the duration of the family residence in Canada, and on certain phases of intermarriage. If both the father and the mother, as well as the person himself, have been born in Canada, the family is clearly of at least three generations' residence in Canada. In 1931, the number of Canadians of the third generation or more was 5,615,559, while there were 428,892 whose fathers alone were born in Canada, and 595,965 whose mothers alone were Canadian-born. Of the remainder, 3,719,234 reported both parents born outside of Canada.

**Immigrant Population.**—Following on the questions relating to birthplace, the census asks two questions that pertain exclusively to persons born outside of Canada and to expatriated Canadian-born. The first of these questions asks the "year of immigration"; the second, the "year of naturalization." From the former the exact "age" of the immigrant population as Canadian residents is ascertained, i.e., their length of domicile in Canada; comparing these records with the annual immigration returns, information as to the fluidity of immigrant population is obtained.

(Thus we know that in 1931 the total immigrant population born outside of Canada was 2,307,525, made up of 748,648 who came to the country during the decade 1921-31, of 669,875 who came during 1911-21, of 625,174 who came during 1901-11, and of 255,379 who came before 1901. Comparisons of these figures with those of the immigration movement by years and with the figures of births and deaths are of great interest. Thus we know that approximately 1,300,000 immigrants arrived in Canada between 1921 and 1931, some 550,000 of whom clearly either emigrated or died during the decade. In addition we know that of the immigrants who came to Canada prior to 1921 (numbering over 3,200,000 between 1900 and 1921) and of whom 1,582,052 were found in the Census of 1921, some 850,000 emigrated (making allowance for deaths) during 1921-31. Simultaneously the excess of births over deaths in Canada during 1921-31 was over 1,500,000 and the numbers of repatriated Canadians at least 325,000. Apparently nearly half a million Canadian-born also emigrated during the past decade. The inter-relation of facts like these are of great importance in considering past and present immigration policies).

Not all immigrants are of non-Canadian birth; a few Canadian-born who subsequently obtained domicile or citizenship in another country but still later returned to Canada are now "immigrants," the Immigration Department so regarding any Canadian who has lived three years or more in another country, if and when he resumes residence in Canada. The Department of Immigration since 1924 also maintains statistics of "returned Canadians" from the United States, i.e., of Canadians (apart from students and travellers), who have gone to the United States for seasonal or other employment, but have returned within a three-years period.

The "year of immigration" question in the census applies to both "British" and "foreign" immigrants. A further question on "year of naturalization" applies only to the foreigner (i.e., the non-British subject), who alone requires "naturalization," or the process of admitting the

foreigner to Canadian citizenship. (4) The question of naturalization and the year thereof is important as showing the relative extent and rapidity with which foreign immigrants of various nationalities throw in their lot politically with the country of their adoption.

**Nationality.**—We now reach the question proper of nationality or citizenship. The terms "national," "nationality," "nationalist," "nationalism," are often used in a loose or general, though understandable, way. The census, which must be specific and clear cut, has a distinct question devoted to this subject, its root purpose being to ascertain to what country the person owes political allegiance.

Every Canadian citizen or national, i.e., every person owing political allegiance to Canada, is entered in this column of the census schedule as "Canadian." The basic legal definition of Canadian nationality is to be found in the Immigration Act, which defines a Canadian citizen as: (1) any person born in Canada who has not subsequently become the citizen of a foreign state; (2) any British subject who has been domiciled for five years in Canada; (3) any subject of a foreign power who has become naturalized and has not subsequently become an alien or lost Canadian domicile. (R.S. Canada, 1927, c. 93, Section 27b).

The part which Canada played in the negotiating of the Peace Treaty and her subsequent enrollment as a member of the League of Nations necessitated an enlargement of the terms of the Immigration Act above cited. In other words, there arose the need of an official definition of the term "Canadian citizen" as distinct from "British subject"—a definition that would be internationally recognized. An act was accordingly passed by the Parliament of Canada in 1922 entitled "An Act to define Canadian nationals and to provide for the renunciation of Canadian nationality" (R.S. Canada, 1927, c. 21). It defined a Canadian national as, (1) any British subject who is a Canadian citizen within the meaning of the Immigration Act; (2) the wife of any such person; and (3) any person born out of Canada whose father was a Canadian national at the time of that person's birth, or, with regard to persons born before the passing of the Act, any person whose father at the time of such birth possessed all the qualifications of a Canadian national as defined in the Act. It went on to describe the procedure necessary in the renunciation of Canadian citizenship. Thus there is now a statute establishing a class of "Canadian citizen" within the wider class of "British subject." No one can be a Canadian citizen without being a British subject, but there was a time when persons admitted to naturalization in Canada might not be able to qualify as British subjects outside of Canada.

Under the section as to children above cited, a child born of Canadian parents in a foreign country retains his Canadian citizenship up to the age of 21 (providing his parents have retained theirs), or until he elects to be a citizen either of the country in which he was born or of some other country.

It will be seen from the above that Canadian nationality has several bases. The census covers each of the phases that have been mentioned, and though instances of inexact definitions being given to the enumerator may occur (in the case of Canadians who have adopted foreign allegiance and have not been formally repatriated on returning to Canada special care was found necessary), there is no reason to believe that it does not obtain a substantially accurate measurement of this highly important phase of the national life.

(4) The Naturalization Act (R.S. Canada, 1927, c. 138) provides that the following persons shall be deemed to be British subjects and therefore requiring only domicile and not naturalization to become Canadian citizens:

(a) "Any person born within His Majesty's dominions and allegiance; and  
(b) "Any person born out of His Majesty's dominions, whose father was a British subject at the time of that person's birth and either was born within His Majesty's allegiance or was a person to whom a certificate of naturalization had been granted; and

(c) "Any person born on board a British ship whether in foreign territorial waters or not."  
Provided (1) "that the child of a British subject, whether that child was born before or after the passing of this Act, shall be deemed to have been born within His Majesty's allegiance if born in a place where by treaty, capitulation, grant, usage, sufferance, or other lawful means, His Majesty exercises jurisdiction over British subjects."

(2) "The wife of a British subject shall be deemed to be a British subject."  
(3) "A woman, who, having been an alien, has by or in consequence of her marriage become a British subject, shall not, by reason only of death of her husband or the dissolution of her marriage, cease to be a British subject."

The sum total of Canadian nationals is of course not ascertainable through the Canadian Census alone. That sum includes Canadians who have left Canada for permanent domicile elsewhere, retaining their Canadian citizenship (with such of their foreign-born children as may elect to hold Canadian nationality), the only sources of information for whom are the censuses of the countries in which they are living. We know, for example, that in 1930 there were 1,278,421 persons residing in the United States who had been born in Canada, and that of these, 368,557 had retained their Canadian citizenship. The Bureau of Statistics has secured as full a return as possible of Canadian nationals resident in other countries.

**Origin.**—The next phase of the subject covered by the census deals with the "origins" or sources from which the Canadian population has been derived. The information sought under this heading is popularly described as involving the concept of "race," but this is not always the case. In a biological and ethnological sense, the term "race" signifies a physical differentiation (as in shape of head, stature, color of skin, etc.) between groups of the human species, such as exists between the black and white races, or under the latter heading between the Nordic, Alpine and Mediterranean groups. Obviously the census cannot pursue inquiry in a field of the latter character, the more so as ethnologists themselves are by no means agreed upon the principles of race classification. Yet some valuable light is thrown by the Canadian Census upon this region. The practical procedure is as follows:

First, all persons of the black, yellow, red or brown races are entered as Negro, Japanese, Chinese, Hindu, Indian, Malayan as the case may be, (orientals being segregated by country of origin). Obviously it is obligatory, so long as the Chinese Immigration Act or the special arrangements with regard to Japanese and Hindu immigration exist, that we should know the exact situation in Canada to which these policies apply. In the case likewise of the Canadian aborigines the enumeration is on distinctly racial lines.

For the remaining elements of the population, those namely which derived originally from Europe,—consisting in the main of the descendants of the English, Irish, Scottish, French, German and other European colonists,—the question as to "origin" usually elicits the original place of residence and implied cultural surroundings of the family before its transfer to the North American continent. In most cases, therefore, the replies to the census question indicate the country or section of Europe from which the family originally came,—as English, Scottish, Irish, Welsh, French, Dutch, German, Polish, Ukrainian, etc.,—being terms relatively homogeneous from a cultural standpoint.

The term "origin" therefore, as used by the census, has a combined biological, cultural and geographical significance. It suggests whence our people come and the implied biological strain and cultural background; following popular usage, the terms, "English stock," "French stock," "Italian stock," etc., are employed to describe the sum total of the biological and cultural characteristics which distinguish such groups from others. In the case of the descendants of the original French colonists, who possess certain definite rights under the Canadian Constitution recognized since 1763, and who number nearly one-third of the present population of Canada, there is of course a further and special obligation; from a population of not over 70,000 at the time of the British conquest, the French stock has grown to a total (between Canada and the United States) little short of four and one-half millions today.

In tracing origin in the case of those of European descent the line is through the father. By applying this rule rigorously, those of mixed family origin are (by the law of large numbers) resolved with a fair degree of accuracy into their constituent elements. Family name is often an index (*Miller* is English, but *Mueller* is German). For Indians, the line is through the mother, and the tribe name is likewise ascertained, as Chippewa, Blackfoot, Cree, etc. All who are found on Indian reserves as wards of the Government are counted as Indians. In the case of the black or yellow races, persons deriving through either parent are so named.

In recruiting a population from outside sources, the main problem is the assimilation of diverse elements. Such features as illiteracy, the tendency to learn and speak the national languages, types of offences, etc., vary greatly as between different stocks. Illiteracy, for example, persists among the Canadian population in evident relation to origin, notwithstanding the uniform operation of Canadian educational and other environment. Inter-marriage likewise varies as within Northern and Northwestern European stocks and those of Southeastern Europe.

Knowledge of this kind is not of theoretical interest alone but invades the field of "practical politics."

**Language.**—The language spoken by the people of a country has a distinct bearing upon its problems of nationality and assimilation. With the exception of religion, no individual right or heritage is more highly prized or more jealously guarded. In Canada, French as well as English has been an official language from the earliest times. The census therefore asks three questions of each person as to language: (1) Whether he or she can speak English; (2) Whether he or she can speak French; and (3) What language is spoken as mother tongue. By mother tongue is meant the language commonly spoken in the home; in the case of immigrants it is usually the language spoken before coming to Canada.

**Religion.**—Finally, the census requires each person to state what is the religious denomination or community to which he or she adheres or belongs, or which he or she favours. The census in many countries omits any question as to religion, because of its decidedly personal nature. In such cases the need is met by data periodically collected from the headquarters of the various churches. The latter method, though it secures a mass of valuable details regarding church membership and finance, does not include non-adherents to an organized denomination, and renders comparisons difficult. In Canada, therefore, a question on religion has always appeared in the census, where it has proved valuable in conjunction with the data on nativity, race, origin and language. It is of course not easy, in view of the wide variations in religious faiths, to secure clear-cut definitions in each and every case. In the 1931 Census, for example, special efforts and instructions were found necessary to avoid confusion as between adherents of the Greek Catholic Church and adherents of the Greek Orthodox Church, and as between Presbyterians who entered the United Church and those who remained outside of that organization.

The matters discussed in the foregoing, it will be seen, affect some of the most fundamental interests of the individual, involving at points technical or legal considerations of considerable subtlety. Yet they must be handled by the census in a simple and even colloquial way, by enumerators of ordinary education and training, collecting their information from "the man on the street" unfamiliar with the problems of census method. Particularly does this apply to the fact that a complete and final view of this subject is obtainable only by considering its several phases not only in and by themselves but in the mass and in their relation to each other.

## §12. Occupations and Industry

No change was made in 1931 from the previous census in the questions put regarding occupations, industry, class of worker and earnings (the basic factors in economic status), but a new and greatly improved dual system of classification for occupations and industries, representing detailed study of conditions in Canada and of census practice in other countries was adopted. The system was issued in two printed volumes in advance of the census for the instruction and use of the coding staff. In it about 12,000 possible occupational designations are combined under some 400 occupational classes, while the industries and services to which the occupations may be assigned number approximately 2,000, assembled under 200 classes.

The "double code," as it is sometimes called, means the classification of the gainfully occupied in respect to occupation as well as industry. The two points of view are radically different. Occupation is the kind of work a person performs, irrespective of where or for what purpose it is performed. A carpenter, for example, may belong to the building industry, if employed by a builder, or to the mining industry, if employed in a mine. Hence the classification of the gainfully occupied by occupation represents the bringing together of all persons in the same type of work irrespective of the industries in which they may be employed. On the other hand, the system of industrial classification of the working population implies the grouping together of all those who contribute their labour to the making of a particular product or the rendering of a special service regardless of the diversity of their occupations. For example, the building or mining industry employs not only persons pursuing building trades or mine-working occupations respectively but also a number in supervisory, clerical, transport, etc., occupations. Occupation determines many factors of prime importance to the individual (*e.g.* health), and it is essential that a comprehensive view of it be obtained by the census. But industrial association or the

grouping together of persons of varying occupations for specific ends has not less important economic implications; unemployment, for example, may follow industrial rather than occupational lines.

In the past the Canadian classification scheme was in the main an occupational classification on an industrial framework; a complete cross-classification of industry by occupations was not possible. The tables prepared for the volume of occupations of the 1931 Census, however, will classify the gainfully occupied not only by occupation but also by industry, and in addition industry will be cross-classified by occupation for Canada as a whole. This method of presentation will disclose for the first time the industrial distribution of the occupations of Canada.

### §13. Wage-Earners

(a) **Earnings.**—The compilation of the data on earnings will be extended as compared with previous censuses to show totals by industries as well as by occupations over the period June 1, 1930, to June 1, 1931.

(b) **Unemployment.**—The emergence of unemployment on a scale never before experienced in the Dominion led to a considerable amplification of the census questions devoted to this outstanding manifestation of the economic collapse. In 1921, when the subject first appeared in the census, three questions were devoted to unemployment. In 1931, these were expanded into nine, chiefly for the purpose of throwing additional light on the causes of unemployment. The questions were in two series, the first two questions dealing with persons found not at work on the census date, June 1, 1931, with a statement of the cause in each case. The second series dealt with the number of weeks of time lost during the preceding twelve months, the time-loss being apportioned under the six headings of "no job," "illness," "accident," "strike or lockout," "temporary lay-off" and "other cause." The inquiry as to unemployment was limited to those specified as "wage-earners" under the heading of the schedule dealing with class of worker. In framing the questions the Bureau had the assistance of the Dominion Department of Labour and of officers of leading labour organizations.

### §14. The Census of Agriculture, 1931

Four schedules were used for the collection of the Census of Agriculture. The statistics for each farm were collected on the first or principal farm schedule, while a second schedule was used in recording the number of horses, cattle, poultry, bees, etc., found within urban limits, together with their products and the products of market gardens, town orchards, etc. A third schedule was devoted to vacant and abandoned farms, while a special form was used in obtaining the values per bushel of field crops,—the enumerator being required to supply on this an estimate of the average value per unit for his enumeration area, instead of obtaining such values on the individual farm schedule as in previous censuses. For census purposes a farm is defined as "all land, being over one acre in extent, directly operated or farmed by one person, either with his own labour alone or with the help of members of his family or hired employees."

The principal farm schedule was drawn up in consultation with the several branches of the Departments of Agriculture of the Dominion and of the Provinces, with which the Bureau also collaborates in its monthly crop reporting system and in its annual statistics of agriculture. The staffs of agricultural colleges throughout the Dominion also contributed advice. Altogether 178 different sources were appealed to, from whom 292 concrete suggestions were received. The Bureau also profited materially by the suggestions and sample schedules prepared and distributed by The International Institute of Agriculture during 1925-28, looking to the taking of a World Census of Agriculture in 1930-31 on uniform lines. The principal schedule was enlarged from 1921 by the addition of questions on farm population and workers, the movement of population between rural and urban, farm mortgages, farm taxes and the causes of crop failure, as well as by various amplifications in detail; altogether it included 605 questions (compared with 540 in 1921), segregated under the following headings: farm operator; farm workers; farm population; farm acreage and tenure; condition of farm land; farm values; farm mortgage; farm expenses; farm facilities; acreages of 1931 crops sown; 1930 crops harvested and sold (grain.

fodder, roots, seeds); irrigated crops; farm garden; market garden; orchard fruits; small fruits; grapes; greenhouse establishments; nursery acreage and products; forest products; maple syrup and sugar; live stock and animal products in all important phases; co-operative marketing and purchasing.

During April and May, 1931, a copy of the principal farm schedule was mailed from the Bureau to each farmer, with a request that he examine it carefully and fill it in, holding it in readiness for the visit of the enumerator during June. This considerably expedited the work and was otherwise productive of good results. The names of the farmers were obtained from the Post Office Department's rural mail delivery lists; 650,000 farm schedules were sent to the farmers and 10,000 to newspapers and clergy.

### §15. The Census of Institutions, 1931

The Census of Institutions was undertaken to ascertain the number and types of institutions in Canada, their geographic distribution, the value of their lands, buildings and equipment, their administration staffs and the numbers of their inmates, with personal facts regarding the latter calculated to throw light on their condition. The governing clause of the Statistics Act (clause 19, (e)) specifies "municipal, educational, charitable, penal and other institutions," but as municipal and educational activities are now covered annually by the Bureau, the present census was limited to the following four classes: (1) Hospitals and Sanatoria, for the care of the sick, including out-patient departments and day nurseries; (2) Mental and Neurological Institutions; (3) Penal, Reformatory and Corrective Institutions; and (4) Charitable and Benevolent Institutions, for adults and children, including almshouses, homes and houses of refuge for adults, institutions for the blind, deaf and dumb, orphanages, institutions for neglected and dependent children, child-placing agencies such as Children's Aid Societies, Juvenile Immigration Societies, etc. These four classes of institutions may be regarded as reflecting respectively four prevalent types of social pathology, namely, physical, mental, moral and economic.

As the great majority of these institutions are in receipt of Provincial or Municipal aid, or are under the control or supervision of Government Departments, a fairly complete list was obtainable in anticipation of the census. In the first instance all inmates and officers were enumerated on the population schedule, each superintendent or chief officer being appointed as census enumerator for the institution under his charge. The returns thus obtained, after entry in the Census of Population compilations, were made the basis of a further and intensive inquiry, constituting the Census of Institutions proper, under which a series of special forms was sent to each institution, covering (a) the movement of population for each institution during 1930—admissions, readmissions, transfers, discharges, etc.; (b) administration staff; (c) financial statement—value of land, buildings, equipment, etc. (The schedules are reproduced in full detail in the volume of the Census Report devoted to the Census of Institutions). In the case of mental and neurological institutions and of penal, reformatory and corrective institutions, a supplementary schedule for each inmate was secured, covering such points as psychoses, mental status, social habits, physical defects, antecedents of various kinds, etc. The co-operation of Provincial Government Departments, officials of Hospital Organizations, directors of Child Welfare Societies, as well as of the superintendents of institutions, in securing prompt and full replies to these schedules is gratefully acknowledged.

It is planned, with the present census as basis, to establish annual statistics for the first three classes of institutions above mentioned, in co-operation with the different Provincial Departments concerned, with in the case of the fourth class a quinquennial survey. With the Census of Population providing the fundamental social record of the people, and with the progress that has now been made in education, employment, immigration, criminal and vital statistics, the present Census of Institutions will materially extend the range of social inquiry in Canada. On only one important section of the statistical field are data almost wholly lacking, namely, the operations, revenues, expenditures, etc., of social and welfare organizations.

## §16. The Census of Distribution, 1931—Merchandising and Service Establishments

On production in its various phases we have now fairly complete statistics on an annual basis in Canada. The annual Industrial Census, which was written into the Statistics Act in 1918, provides effectively for recording the products of mines, fisheries, forests, power plants and manufactures, with the subsidiary phenomena of capital, labour, fuel consumption, and other factors—the whole in collaboration with the several Dominion and Provincial Departments concerned in specific sections of the field. Agricultural production is similarly covered from year to year. Apart, however, from the grain trade, the marketing of live stock and of certain animal and other products, no data are systematically available with regard to the extended and ramifying operations which bring the multifarious products of industry into the hands of the ultimate consumer. Yet the number of persons employed in distribution is nearly half a million, while the volume of internal trade, represented by wholesale and retail merchandising and service establishments, is two and one-half times that of imports and exports. In 1921-23 a first attempt to remedy this omission was made by the Bureau of Statistics by collecting the names and addresses of merchandising concerns through the census enumerators and addressing a questionnaire to them later from the Bureau, but facilities were lacking for completing a comprehensive survey. The occasion of the 1931 Census was accordingly taken to meet the situation on broadly similar lines as follows:

On a schedule which is reproduced in Appendix II, the enumerators of population and agriculture were instructed to collect the names, addresses, and certain other elementary facts regarding each wholesale or retail merchandising or service establishment found operating in their respective enumeration areas. The returns received from the field were checked with directories, financial records, etc., and card indexed according to a classification scheme prepared in advance. A schedule was then addressed to each establishment according to the nature of business or size of operations. The schedules are reprinted in the volumes of the Census Report in which the final results are published, but as an indication of the scope and general method of the investigation they may be listed as follows:

### RETAIL ESTABLISHMENTS:

- |                     |   |
|---------------------|---|
| Retail Schedule No. | 1.—For establishments doing business under \$10,000.  |
| " "                 | 2.—For establishments doing business from \$10,000 to \$25,000.   |
| " "                 | 3.—For food stores doing business over \$25,000.  |
| " "                 | 4.—For drug stores doing business over \$25,000.  |
| " "                 | 5.—For other stores doing business over \$25,000.   |
| " "                 | 6.—For automobile dealers.  |
| " "                 | 7.—For larger service establishments (theatres, laundries, cleaning and pressing, barber shops, beauty parlors, shoe repair shops, cartage and transportation, and other service, repair and amusement establishments). |
| " "                 | 8.—For hotels.  |
| " "                 | 9.—Capital structure and ownership form.  |
| " "                 | 10.—For bakeries reporting also to Industrial Census.   |
| " "                 | 11.—For farm products bought or taken in from farmers by retail merchants in places of less than 10,000 population.   |
| " "                 | 12.—For dairies reporting also to Industrial Census.  |
| " "                 | 13.—For butcher shops (meat animals slaughtered).   |
| " "                 | 14.—For channels of sales distribution. Manufacturing firms.  |
| " "                 | 15.—For co-operative organizations.   |

### WHOLESALE ESTABLISHMENTS:

- |                        |                                      |
|------------------------|--------------------------------------|
| Wholesale Schedule No. | 1.—General (large establishments).   |
| " "                    | 2.—Food products.                    |
| " "                    | 3.—General (smaller establishments). |

## MULTIPLE ORGANIZATIONS:

- Multiple Schedule No. 1A.—Wholesale general (all other than oil and gasoline stations).  
 “ “ 1B.—Wholesale oil and gasoline stations (bulk tank).  
 “ “ 1C.—Chain store warehouses (wholesale).  
 “ “ 5A.—Retail general.  
 “ “ 5B.—Retail oil and gasoline filling stations.

## §17. Summary of Census Questions

Summing up, the total number of questions asked through the enumerators of the Census of 1931, compared with the preceding decennial census was as follows:

Schedule	Subject	Census of 1921	Census of 1931
1	Population.....	35	40
7	Supplemental schedule for the blind and for deaf-mutes.....	5	6
2	Agriculture.....	469	605
2a	Vacant farms and abandoned farms.....	-	17
3	Animals, animal products, etc., not on farms.....	52	52
10	Merchandising and Service Establishments.....	4	10
	Total.....	565	730

The above does not include the questionnaires sent out by the Bureau to Institutions and to Establishments in connection with the Census of Merchandising and Service Establishments.

## §18. Organization for Taking the Census, 1931

Up to and including the Census of 1901, each census of Canada was taken by an organization created *de novo*, and consequently lacking experience both in the planning and execution of a census—in the relating of the census questions to the general body of statistics as described in an earlier paragraph, and in the technique of the enumeration and compilation process. To remedy this defect a permanent census office was established in 1905. This now constitutes one of the branches of the Dominion Bureau of Statistics, its function being to maintain connection between census and census, thus enhancing its continuous and cumulative character; to ensure a better adaptation of the census to current needs and conditions; and to form the nucleus and directing centre of the much larger personnel which the actual work of the census involves. The latter falls under two main headings: (a) the collection of the data, for which an army of field officers and men are employed for a period of some weeks; and (b) the compilation and tabulation of the census reports, for which a special provision of the Civil Service Act permits the retention of a staff of several hundred temporary employees for a maximum of three years. The far-flung nature of both these phases—the drawing up of the schedules and of the instructions governing each item thereon; the delimitation of the exact area to be covered by each of the 14,000 enumerators; the appointing and instructing of the latter; the apportioning and forwarding of the necessary schedules in each case and the receipt back of the completed returns; together with each handling of the latter in the numerous processes to which they are subjected in the Bureau, which involves not only the checking and summation of hundreds of millions of entries, but their cross-classification and analysis from numerous points of view; all combine to emphasize the necessity of the most careful planning in advance of every step down to the final stages, if disastrous confusion and waste are not to be encountered. The time element is also important, for the work must be conducted with the utmost rapidity and *pari passu* in its several parts if the results are to have practical value. As the United States Advisory Committee on the Census remarked “few persons other than those employed on the census realize the magnitude of the undertaking or the difficulty of carrying it to completion within the period prescribed by law.”<sup>(1)</sup>

<sup>(1)</sup> Journal of the American Statistical Association, March, 1923, p. 632. When the first census of the Turkish Republic was taken in 1927 a suspension of ordinary business throughout the country was required and an immobilization of transport by land and sea for twenty-four hours.

### §19. The Field Work

For the purposes of the census, the Statistics Act requires that the country be first divided into "census districts" corresponding as nearly as possible with the federal electoral divisions or constituencies for the time being—this in view of the association of the census with parliamentary representation. Each "census district" is then to be subdivided into "census subdistricts" or units of enumeration, the latter to correspond where possible with electoral (polling) subdivisions throughout the country. For territories without established boundaries or subdivisions special census divisions and subdivisions are created. Each census district is in charge of a supervisory "census commissioner"; under the commissioner a "census enumerator" is assigned to each census subdistrict. The census enumerator is the only census official coming into direct contact with the general public; he it is who makes the house-to-house and farm-to-farm canvass and who is primarily responsible for the details collected on the census schedules. The necessity of providing that no more nor no less than a suitable amount of work should be assigned to each enumerator (experience has demonstrated this to be a population of 600-800 in ordinary rural districts, and of 1,200-1,800 in urban), with similar provision in the case of census commissioners, renders departure necessary in many cases from the electoral boundaries; several of the federal constituencies are too large or too varied in physical or economic character to admit of satisfactory control by a single commissioner and are accordingly divided—and the polling subdivisions are not always convenient as census subdistricts. In all such cases, however, the division is effected in a way that permits compilation of the results in the form required for the purposes had in mind by the Act. The drawing up of the scheme of census districts and subdistricts is a task of considerable magnitude; it is put in hand about two years in advance of the census date, and is carried out not only in the light of conditions revealed in the preceding census, but in consultation with local officials, so that no inhabited area may be overlooked or left unprovided with the organization best suited. It may be added that the total number of subdistricts embraced in the 1931 organization was 15,167 compared with 11,428 in 1921.

The instructing of the field officers of the census was carried out as follows: on appointment by the Minister some four months prior to the date of the census, each census commissioner was supplied with a set of schedules, instructions, regulations and statutory provisions appertaining to the census, together with a detailed description and map of his district. After an interval he was visited by a representative of the Bureau (the chief or assistant chief of the Census Branch) who discussed the work with him until satisfied as to his thorough understanding of it. The necessary oath of office was then administered (Statistics Act Section 6), and the commissioner proceeded to the first detail of his task, that of examining and passing upon the descriptions of the subdistricts into which his district was divided. On assurance in this way that every section of the district was effectively provided for, the appointment of the enumerators was proceeded with—this being withheld until the weeks immediately preceding the census.

The selection and appointment of the enumerators was primarily in the hands of the commissioners, under an instruction that only persons of intelligence and probity and thoroughly familiar with the topography of the subdistrict should be chosen. Even when reduced to the simplest terms the work of the census enumerator is highly responsible and far removed from routine. Organizing ability, conscientiousness and realization of the importance of the work and of the difficulties which shortcoming in any particular involves are *sine quibus non*. Local officials, therefore, particularly school-teachers, were given the preference, except in the case of assessors or others associated with taxation. After nomination, the enumerators were instructed by the commissioners in much the same way as the latter by the Bureau, *i.e.*, after being supplied with the various census documents they were assembled in groups at convenient locations, when full oral instructions were added and points in doubt cleared up. At the conclusion of such instruction a written examination was held, each nominee being required to make the proper entries on the various census schedules for a hypothetical family and farm, the description of which was supplied by the Bureau. The written entries were then forwarded to the Bureau for inspection prior to notification of appointment.

On completion of his enumeration, each census enumerator was required to deliver the schedules in person to the commissioner for examination as to their satisfactoriness prior to acceptance for dispatch to the Bureau. All payments to enumerators were made only on voucher by the commissioner.

Altogether there were employed in the 1931 Census, 254 census commissioners in 257 census districts, and 13,886 census enumerators in 15,167 census subdistricts. The number of districts and subdistricts by provinces, with comparative figures for the Census of 1921, is shown in the following statement:—

Province	Census of 1921		Census of 1931	
	Number of Census Districts	Number of Census Sub-districts	Number of Census Districts	Number of Census Sub-districts
Prince Edward Island.....	3	157	3	187
Nova Scotia.....	14	797	13	873
New Brunswick.....	11	454	12	558
Quebec.....	71	2,820	72	3,703
Ontario.....	83	4,226	83	4,890
Manitoba.....	15	633	17	909
Saskatchewan.....	16	832	21	1,767
Alberta.....	13	700	17	1,196
British Columbia.....	15	716	16	1,020
Yukon.....	-	18	1	19
Northwest Territories.....	-	2	1	38
Royal Canadian Navy.....	-	3	1	7
Canada.....	241	11,428	257	15,167

The number of enumeration areas and the number of enumerators employed by sex in each province is shown in the following statement:—

Province	Enumeration Areas	Number of Enumerators		
		Total	Males	Females
Prince Edward Island.....	187	180	165	15
Nova Scotia.....	873	830	642	194
New Brunswick.....	558	495	447	48
Quebec.....	3,703	3,469	3,234	235
Ontario.....	4,890	4,769	4,257	512
Manitoba.....	909	869	826	43
Saskatchewan.....	1,767	1,535	1,262	73
Alberta.....	1,196	1,013	867	56
British Columbia.....	1,020	857	785	71
Yukon.....	19	15	15	-
Northwest Territories.....	38	41	41	-
Royal Canadian Navy.....	7	7	7	-
Canada.....	15,167	13,886	12,639	1,247

A record of the occupation of each enumerator was obtained. The most numerously represented occupations were as follows:—

Farmers 4,752; Clerks \$19; Homemakers 708; Students 653; Salesmen 585; Merchants 563; Retired and No Occupation 513; Agents 432; Accountants 374; Insurance Agents 285; Labourers 274; Book-keepers 194; Carpenters 175; Teachers 171; Indian Agents 114; Stenographers 89; Royal Canadian Mounted Police 76; Painters 74; Mechanics 71; Machinists 68; Travellers 58; Fishermen 56; Contractors 51; Lawyers 49; Notaries 47; Electricians 46; Clergymen 44; Miners 43; Brokers 43; Printers 42; Grain Buyers 42; Ranchers 40; Managers 40; Tailors 36; Foremen 35; Blacksmiths 34; Shippers 34; Butchers 33; Farmers' Sons 32; Secretaries 29; Gardeners 27; Telegraph Operators 27; Scalars 26; Veterinary Surgeons 26; Barbers 25; Plumbers 25; Prospectors 25.

The payment of census commissioners and census enumerators is almost entirely on a piece basis, i.e., according to the population, farms, etc., with provision for certain travelling and other expenses and for special rates in special cases. The regulations on rates and allowances are reprinted in Appendix III. In the case of the commissioners they include a series of special allowances; the statement therefore serves as listing the census districts.

It will be appreciated that for a census which must cover half a continent, only a part of which has been brought under settlement, and where wide variations of natural conditions prevail in the remainder, the above description is by no means complete. Even in parts adjacent to settlement, many areas called for arrangements of a special character, such as the organization

of expeditions by pack train, canoe, motor boat or even airplane. For the Yukon and Northwest Territories and in the remote and seldom visited northern regions of Ontario and Quebec, the co-operation of the fur-trading companies and of different church missions was enlisted—many of whose reports recorded physical difficulties overcome and conditions among the native inhabitants far removed in character from the usual census document. In other outlying areas the Royal Canadian Mounted Police conducted the census (including Bache Peninsula and Ellesmere Island—only 750 miles from the North Pole), while the Indian Department performed a like service for the Indian population on reserves or otherwise within its jurisdiction. The Department of the Interior co-operated in the lower Mackenzie River valley as in the previous census. For the Arctic regions the schedules were dispatched a year before the census date by the *S.S. Boothie*, which during the ensuing months visited points where the native population of these regions is congregated; certain of these returns were forwarded by radio.

**Publicity.**—No statement of the preparatory organization of the census would be complete without reference to the means taken to interest the general public and enlist their co-operation in giving prompt and accurate replies and otherwise assisting in the work. On May 15, proclamation of the census was made by His Excellency the Governor General. (For text of proclamation see Appendix IV.) Concurrently, advertisements as to the purpose and function of the Census were inserted during May in leading newspapers, (an example is reproduced below), this being preceded or succeeded by a series of press releases dealing with specific questions in the enumeration (eleven of such releases were made), as well as by a comprehensive pamphlet entitled "The Coming Census—How it is Taken, Why it is Taken," which was made the basis in whole or in part for numerous articles in the press. The clergy of the country were circularized as to the census question bearing on religion. Through the good offices of the Moving Picture Service of the Department of Trade and Commerce a film depicting various census operations was exhibited in the cities, towns and villages throughout Canada. On the eve of the census a radio talk by the Honourable the Minister of Trade and Commerce relayed throughout Canada made an appeal for co-operation with the enumerators, while similar talks by different officers of the Bureau and by census commissioners at local stations on various phases of the census gave explanations designed to facilitate the work in the field.

*Copy of Census Advertisement, 1931*

**The Census of Canada, 1931**

In the opening weeks of June every family in every city and town and on every farm will be visited by a representative of the Government for the purpose of taking the Seventh Census of Canada.

The census provides the foundation on which all our economic and social information rest. It measures the human element of the country—the numbers, sex, age, nationality, occupations, religion, etc., of the people, so that a true record of national development may be obtained for use in formulating policies for the further progress of the nation.

No person can be harmed in any way by furnishing the information required. The census has nothing to do with taxation, with military service, with the compulsion of school attendance, with immigration, or the enforcement of any Dominion, Provincial, or Municipal law or regulation.

You are under legal obligation—subject to penalty—to answer all inquiries made on the census schedule, but you are assured that your answers will be treated in absolute confidence by the census enumerators and by the Bureau of Statistics.

I earnestly urge upon all persons to answer promptly, completely and accurately all inquiries addressed to them by the census enumerators or employees of the Dominion Bureau of Statistics.

Issued by

H. H. STEVENS, M.P.,

*Minister of Trade and Commerce.*

**Completion of the Field Work.**—Differences in the nature and extent of the questions make exact comparison with previous censuses difficult, but it may be said that the field work in 1931 was completed with more than the usual expedition, and without untoward incident of more than minor proportions. Under the regulations, work must be begun by the enumerators promptly on June first and continued uninterruptedly and with all possible dispatch until its completion, no census officer who has once subscribed to the oath of office being permitted to resign or abandon his employment. The arrangement in the vast majority of cases permits of completion by the enumerator within a fortnight or three weeks' time—especially in urban areas—the whole being calculated to ensure receipt of the revised returns from the commissioners by July (though many were received earlier) except for the more remote and sparsely settled areas. From the accompanying statement it will be seen that somewhat better time was made with the enumeration than in 1921, notwithstanding that the main schedules called for a larger amount of data, 77.6 p.c. of the returns being in at the end of July, 1931, compared with 67.8 p.c. by July, 1921, while the percentages at the end of August were 94.9 and 93.8, respectively. The prevailing unemployment rendered the task of obtaining suitable enumerators much easier than in 1921, and there were few if any serious criticisms of the results of the census as announced by cities and towns during the summer and autumn months of 1931. (1)

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(1) Though the results of the Census of 1931 by local areas escaped challenge to an exceptional degree, their divergence from local estimates as given out by directory companies, assessors, voters' lists, etc., is the occasion of such frequent comment as to warrant repetition of the following explanatory statements which were issued in 1921:

**City Directory Results.**—A city directory is not an enumeration of the population. It omits entirely a large proportion, sometimes more than one-half, namely wives and children. On the other hand, it may contain duplicate entries, as of business men at their residences and at their places of business; it also contains some names of non-residents, as of business men living outside the municipality. The population figures given out by city directory publishers are not the sum of the persons entered, but are estimates arrived at by adding the number of names and multiplying the result by an arbitrary figure usually 2½ to 2½. Such estimates cannot be compared with a census which enumerates every man, woman and child once only at the place of permanent residence. In most Canadian cities, the city directory results and the Census are widely apart.

**Assessment Rolls.**—Assessment rolls similarly seldom agree with census results. They include many duplications, as in the case of non-resident property holders, and of persons owning property in different parts of the city. Occasionally also families are entered twice,—as in cases where they have moved while the assessor was going his rounds. Assessment rolls are usually from 5 p.c. up in excess of census figures, though sometimes they are lower, particularly in cases where the assessors do not make personal visits to householders annually.

**Voters' Lists.**—The voters' list is an uncertain basis on which to make an estimate of population. For municipal purposes an individual is entered on the voters' list in every section in which he holds property. A change in the number of wards in a city will accordingly change the aggregate number of voters. The basis of inclusion is also subject to change. For example, in recent years a large number of women's names have appeared as co-proprietors with their husbands; the institution of direct taxation has also added many names both of men and women. The fact that in 1921 the population of a given municipality was, say, six times that of the number on the voters' list is no indication that the same relationship exists today. The census of certain Canadian cities is only 50 p.c. in excess of the number on the voters' lists, whereas in other cases it is over 100 p.c. in excess.

**General Considerations.**—In addition it should be borne in mind that in a rapidly growing urban community, there is a natural tendency after a certain stage is reached for the central portions to remain stationary or even to decline in domiciled population, the growth in such population taking place in the suburban and outlying districts. Manhattan Island, for example, which was formerly New York City and is now the borough of Manhattan, has declined in population during the past ten years, though New York as a whole has increased rapidly, especially in the suburbs now included in Greater New York. The City of London with an area of about one square mile has a day time population of over a million people, but has only about 14,000 at night. Of specific cases of omissions reported to the Bureau a large proportion are usually found included in the census, details having been furnished by other members of the family; in other cases different families have been enumerated at the address given (indicating a removal since the census, or an error in allocation rather than an omission); in other cases non-residents are found to be concerned. Under the Canadian system, the padding of the census is the danger on which chief vigilance must be exercised, as both commissioners and enumerators are paid according to the number of names, etc., enumerated. The Bureau during the weeks immediately following a census repeatedly requests through the press that any individual who has reason to believe that he or she was missed or was inaccurately recorded should communicate either with the local census commissioner or with the Bureau, when a full investigation of the circumstances is carried out and any addition or correction found necessary made.

## MONTH OF RECEIPT OF ENUMERATORS' RETURNS, 1941, 1921 AND 1931

Month	Census 1911		Census 1921		Census 1931	
	Number	Per cent of total	Number	Per cent of total	Number	Per cent of total
Reports received in						
June.....	2,661	27.43	912	7.96	3,066	20.21
July.....	5,854	60.34	6,836	59.83	8,703	57.38
August.....	873	9.00	2,966	25.96	2,619	17.27
September.....	96	0.99	528	4.62	663	4.37
October.....	102	1.05	130	1.14	91	0.60
November.....	62	0.64	33	0.29	20	0.13
December.....	46	0.47	6	0.05	1	0.01
January.....	-	-	10	0.09	1	0.01
February.....	9	0.07	3	0.03	-	-
March.....	-	-	1	0.01	3	0.02
Totals.....	9,703	100.00	11,425	100.00	15,167	100.00

## MONTH OF RECEIPT OF ENUMERATORS' RETURNS BY PROVINCES, 1931

Provinces	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Mar.	Totals
Prince Edward Island.....	26	161	1	-	-	-	-	-	-	187
Nova Scotia.....	159	450	188	68	8	-	-	-	-	873
New Brunswick.....	83	406	69	-	-	-	-	-	-	558
Quebec.....	1,013	2,004	389	250	31	13	-	-	3	3,763
Ontario.....	1,445	2,689	846	105	5	-	-	-	-	4,890
Manitoba.....	129	532	156	5	7	-	-	-	-	809
Saskatchewan.....	140	1,049	493	83	2	-	-	-	-	1,767
Alberta.....	4	743	341	105	1	-	1	1	-	1,196
British Columbia.....	68	615	285	25	27	-	-	-	-	1,020
Yukon.....	-	-	-	19	-	-	-	-	-	19
Northwest Territories.....	-	4	14	3	10	7	-	-	-	38
Royal Canadian Navy.....	-	-	7	-	-	-	-	-	-	7
Totals.....	3,066	8,703	2,619	663	91	20	1	1	3	15,167

**Cost of the Field Work.**—The cost of the field work of the 1931 Census compared with that of 1921 is shown in the subjoined statement. An increase from \$1,443,003.72 to \$1,671,884.37, amounting to \$228,880.65 or 15.86 p.c. is indicated. This is due to the following circumstances, namely, (a) the growth of the country and corresponding increase of the extent of the census task; the number of the population enumerated increased from 8,788,483 to 10,376,786, i.e., by 1,588,303 or 18.07 p.c., while the number of occupied farms increased from 711,090 to 728,623, i.e., by 17,533 or 2.47 p.c., and the number of trading establishments covered from 66,814 to 175,950, i.e., by 109,136 or 163.34 p.c. (the latter increase including 41,094 service establishments not enumerated in 1921). Reflecting these figures, there were sixteen additional commissioners and 2,458 additional enumerators employed. (b) The allowances paid to the enumerators and commissioners were increased. The increases to enumerators were in the following cases: trading establishments, from two cents to ten cents; farms of five acres and over, from thirty cents to thirty-five cents; in the Prairie Provinces the rural allowance for expenses was increased from six cents per name to seven cents, in British Columbia from fourteen cents to fifteen cents, in the remaining provinces from four and one-half cents to five cents. The allowances to commissioners were increased as follows: special allowances for travelling expenses while instructing enumerators, totalling \$9,394.27, and for rent of halls for instructing enumerators totalling \$5,578.08, were paid where similar charges were not met in 1921. The rate for supervising the Blind and Deaf schedule was raised from one-half cent to one cent, and trading establishments from one-half cent to one cent. The special allowances to commissioners were also increased by \$6,250. Notwithstanding the higher rates, which were justified by the nature of the work to which they were applied, the *per capita* cost of the field work of the 1931 Census was but 16.11 cents compared with 16.41 cents in 1921, a *per capita* decrease of 0.30 cents or about 2 p.c.

Items		1921	1931
Commissioners.....	No.	243	254
Allowances.....	\$	77,500-00	83,750-00
Travel and disbursements.....	\$	13,000-95	30,320-17
Schedule rates.....	\$	113,451-80	133,621-78
Total.....	\$	203,951-75	247,697-95
Enumerators.....	No.	11,749	15,167
Expenses and schedule rates.....	\$	1,186,268-73	1,360,852-71
Printing of schedules.....	\$	39,745-00	44,196-14
Freight.....	\$	8,580-31	14,679-18
Travelling of officers of Bureau of Statistics.....	\$	2,145-21	1,123-26
Telegrams.....	\$	2,302-11	3,035-13
Grand Total.....	\$	1,443,003-72	1,671,884-37

## §20. Compilation and Tabulation of the Census

Extended and multifarm as is the organization for collecting the census, that for its summation, compilation and tabulation into a form suited to the multifarious uses it must serve presents an even larger problem. In the first place, just what analyses are to be made of the items, singly and in combination with one another?—in other words, what are the important angles from which the data are likely to be approached in their theoretical or practical application? The plan which was followed for the present census in answer to this question is set out in Appendix V as an *aperçu* of the final objectives of the census. Further, as is well known, the compilation of the census is now carried out by machinery, the several facts ascertained for each person being punched on cards (of size approximately  $6\frac{1}{2}$  inches by  $3\frac{1}{4}$  inches), the cards being then counted, sorted or otherwise manipulated by machines, which record the details as required. (The principal machines used by the Bureau of Statistics were designed, adapted and constructed in the Bureau itself, as will be described in a subsequent section). Thus, the manner in which the various machines operate in producing the results must be taken into account in anticipating staff requirements. Finally, the preparation of the numerous tables from the materials supplied by the machines must be arranged for. Many of these processes require large numbers of employees. At every stage the closest supervision is necessary, as an early error or omission may involve an enormous amount of labour later on.

In more detail the several stages of compilation and tabulation are as follows:—

**1. Preliminary Examination.**—As the boxes containing the enumerators' returns are received from the census commissioners (previously examined and *visé* in the presence of the enumerator) they are inspected and checked to ensure completeness. The check is carried out with the aid of local maps, directories, municipal returns, and previous censuses, any apparent omission or discrepancy being made subject of immediate inquiry. If found complete and satisfactory, the returns are accepted for compilation and sorted for the different compilation processes. At this stage the enumerator is paid 60 p.c. on account, the balance being held for final audit of the returns.

**2. Population.**—The population schedules are then handled as follows:—

- A hand count is made of the population, by sex, as a basis of the preliminary releases as to total population by cities, towns, villages, etc., and for audit of the enumerators' charges.
- Revision.*—A staff is then employed in the examination of each entry on the schedule for the detection of errors or omissions in detail—all cases of which are referred back to the commissioner or enumerator concerned.
- Coding.*—On completion of revision, the schedules pass to the coding staffs, two in number, whose duty is to code the family and personal record and the record of occupation and unemployment, respectively, which are subsequently punched on different cards. The occupation code as already described is of an elaborate character and careful preliminary training of the staff devoted to it is necessary; the organization of

this division of the work is one of the most difficult of the compilation process, though satisfactory revision work in advance reduces it greatly. "Coding," it will be understood, consists in applying a series of descriptive numbers to the entries as to occupations, industries, causes of unemployment, etc., on the census schedules, so that they may be transferred to the card.

- (d) *Punching and Verifying.*—The schedules are then sent to the card-punching staffs. Two cards are employed (see illustrations on a later page). Card No. I was punched on the "pantagraph" machine and Card No. II on a Hollerith punching machine. After punching, the cards are checked or verified as to accuracy by being passed through a verifying machine. They are then "gang-punched," i.e., punched by machinery as to certain facts (e.g., locality) which being the same for considerable numbers of cards can be handled in a "wholesale" way, at a saving of time and expense.
- (e) *Sorting and Tabulating.*—Compilation proper is reached when the cards pass to the sorting and tabulating machines which carry out the segregations and analyses of the data. Card No. I is handled by a combined sorter-tabulator specially built in the Bureau, while Card No. II is handled by commercial sorters and printer-tabulators. In the case of Card No. I the results by areas are photographed from the dial of the machine, while the results from Card No. II are automatically printed on result-slips.
- (f) *Preparation of Tables.*—After examination and check for inconsistencies and errors, the results of the tabulation processes are transferred to a special staff who construct from them the tables which will appear in the printed volumes of the census. For a general description of the principles which govern the compilation of these tables and their arrangement in the volumes the reader may be referred to Section 22 of this report hereunder (beginning p. 36)—also Appendix VI.

**3. Agriculture.**—The agricultural schedules are treated in much the same way as above described for population, except that a large portion of the data is compiled on adding machines to which the schedules are transferred immediately on revision. This includes the parts of the schedule relating to crops, live stock, fruits, etc. The parts referring to the occupier, tenure, acreage and values are coded and transferred to punch cards, and the results obtained by commercial sorters and printer-tabulators. Vacant and abandoned farms are separately compiled.

**4. Merchandising and Service Establishments.**—This division of the census required somewhat elaborate organization within the Bureau, which may be briefly described as follows: The lists of establishments as received from the enumerators were examined first, for the deletion of entries not within the scope of the census, and secondly for additions found by checking with financial and trade directories. Each establishment was then entered on a card index, containing the name and address, the schedule number and the type or types of schedules to be mailed. In the case of the units of chain organizations, and for co-operative organizations, a special notation was made. As the card index was completed for each locality, it was passed to the mailing clerks who dispatched the schedules and instructions, and entered the date of mailing. On return, the schedules were checked against the index and the corresponding cards removed. About fifty per cent of the census schedules were returned without further solicitation, but it was necessary to undertake a considerable amount of follow-up work both by mail and, in certain localities, by field workers to secure the remainder. Multiple returns for organizations operating a number of units were sought directly from the head offices.

The incoming retail and wholesale schedules were separated and passed to the respective editing divisions. Here they were checked, incomplete or apparently inaccurate returns being dealt with by further correspondence. As completed, the schedules were coded by a special staff for the punching machines. For the preliminary reports of the census, one 45-column tabulating card (covering employees, salaries, sales, stocks, kind of business and type of operation) was used. The cards as completed were sent to the central machine tabulating section for the preparation of the preliminary tables.

As more detailed information was required for the final reports, an 80-column card was used. In addition to the tables which were prepared from the punched cards, and which covered the

salient features of merchandising and service operations, separate tabulations of commodity breakdown, seasonal employment, capital employed, and other features were made by hand and with the aid of adding machines.

**5. Institutions.**—The revision of schedules was made by small separate staffs for the different classes of institutions. The major part of the compilation was done by hand, but for penal and mental institutions a card was punched for each inmate. Beginning with 1932, the mental hospitals are supplying a quarterly individual record of admissions, discharges, etc., the Bureau to complete a tabulation therefrom at the end of each year.

**Staff.**—The extra staff taken on for the 1931 compilation was as follows:—Early in 1931, some 50 clerks and labourers were employed in preparing a "bordereau" or minute of the supplies required by each enumerator, and in subsequently assembling, labelling and parcelling the materials for dispatch; they also addressed the advance schedules sent to agriculturists. From June twenty-first, when the receipt of materials from the field began, the compiling and accounting staff was set up, the clerks being brought on in relays till some 800 were at work in August. It may be explained that in anticipation of the census the staff requirements of the Bureau had been laid before the Civil Service Commission who held a special examination throughout Canada in April and established an eligible list of 1,000 clerks. The examination was similar to that for Grade II clerks, and those who passed were made eligible for permanent positions in the Civil Service as well as for the temporary census employment. The extra help taken on by the Bureau was all of the one class, except that 15 "supervisors" were specially selected. Stenographers, messengers, etc., were recruited from the ordinary Civil Service lists. A clinic in charge of a registered nurse was established for the supervision of the health of this staff. The full staff, except for a few resignations, was retained until March, 1932, when 112 were retired, followed by the retirement of 235 in May and of 90 in June, 1932, as the completion of the work permitted. Further retirements brought this staff down to 290 by the end of the fiscal year 1932-33. On salaries for census clerks the expenditure in 1930-31 (preparatory) was \$13,114.10; in 1931-32, \$547,210.91; in 1932-33, \$339,584.77; and in 1933-34, \$257,024.48.

A daily record was kept of the work of each clerk in every department, including revision, coding, punching, verifying, adding, sorting and tabulating. A scheme of graduated salary increases to be based on these records was rendered impractical by the prevailing financial stringency.

## §21. New Census Machines—Sorter-Tabulator and Verifier

(See illustrations, pages 40-41.)

Reference has just been made to the fact that the compilation of the census is now carried out almost entirely by machinery, and that in this connection a new system was used by the Dominion Bureau of Statistics in 1931,—in particular a new sorter-tabulator of the Bureau's own invention and construction. As this machine has proved very effective, representing a marked advance upon that previously in use, a brief description will be of interest, not only to census officials and others employing equipment of the kind, but to the large and growing body of research workers in the social and economic sciences, for whom its special merit is that it supplies materials in an abundance of cross-classification and with a wealth of detailed analysis that was hitherto impossible.

The compilation of the census by means of a punch card mechanically sorted and tabulated is, of course, "an old story." The earliest machines date from the 'eighties (the United States Census employed them in 1890), since when they have been continuously improved. In 1911, a number of sorters and tabulators were built for the use of the Canadian Census on the then latest model. The operating process was briefly as follows: the cards as delivered from the punching staff and in the order in which the names occur on the census schedule—male and female, old and young, citizens and aliens—were first sorted (*e.g.*, by sex, ages, or birthplaces, etc.) and were then transferred to the tabulators which cross-classified each group with five other columns on the census card. The tabulators were fed by hand, and the results had likewise to be transferred by hand from strips printed on the machine. The limitations of this method (which was used also for the Censuses of 1916, 1921 and 1926) apart from the slowness of hand operation and the danger of

*Continued on page 34*

## GENERAL CARD

1	2	1	1	M	0	60	PEI	Eng	USA	Hun	Ukr	CC	31	En	Bel	Ice	En	En	It	Adv	CS	Mor	WE	
•																							•	
1	1	2	2	F	5	65	NS	Ire	Aus	Ice	Eup	CB	30	Ir	Buk	It	Fr	Fr	Lit	Ang	Dis	No	RL	
•		•		•																			•	
2	2	3	3	S	10	70	NB	Sc	Bel	It	Arm	CF	29	Sc	Bul	Jap	E & F	Chi	Mag	Bapt	Dkb	Pag	No	
•																								
3	3	4	4	M	15	75	Que	Wls	Bul	JS	Chi	BC	28	OB	Chi	JS	No	Dan	Nor	Bre	Evn	Pnt	0	
•					•																			
4	4	5	5	W	20	80	Ont	LI	CS	Lit	Jap	BB	27	Fr	Cs	Lit	Syr	Dut	Pol	Bud	Fds	P.Br	-1	
•			•																					
5	5	6	6	Dv	25	85	Man	Alta	Den	Nor	Syr	BF	26	Aus	Dan	Neg	Ukr	Fin	Rou	Chr	Gk	C.Pro	1-3	
•			•																					
1	2	7	7	NG	30	90	Sas	Ind	Fin	Pol	Tky	FC	25	Dut	Esk	Pol	OT	Fle	Rth	C	C.Gk	O.Pro	4-6	
•												•												
1	1	8	8	0	35	95	Alb	Nfd	Fr	Rou	Asia	FB	26	Ger	Fin	Rou	NG	Gnl	Rus	Cof	HM	R.C	7-9	
•								•						•									•	
2	2	C	9	1	40	100	BC	NZ	Gal	Rus	S.A.	FF	24	Jew	Gnl	Asin	Aus	Ger	S.Cr	Syr	Arb	IBS	SA	Re.E
•																								
3	3	T	2	2	45	NG	Yuk	S.A	Ger	Spa	Sen	NG	25	Ind	Grk	Eur	Boh	Grk	Slov	Ukr	Jow	U.Br	Cdta	
•																								
4	4	V	Wh.	3	50	-21	NWT	W.I.	Gre	Swo	OT	Nat	26	Nor	Hin	Swo	Bul	Hun	Spa	Yd	Lut	Utd.	C	OT
•			Res		•																•			
5	5	R	Ind.	4	55	21+	Can	Ot.	Br	Hol	Sad	US	27	Rus	Hun	Sas	Buk	Ice	Swe	OT	Men	Utn	NG	
•			Res																					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	

## FAMILY AND OCCUPATION CARD

CENSUS DISTRICT	FAMILY AND OCCUPATION CARD	HOUSEHOLD										PRIVATE FAMILY										PERSONAL										OCCUPATIONS & EARNINGS										UNEMPLOYMENT																																																									
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
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The above are reproductions of the "general population card" and of the "family and occupation card". On the former the performances show that on June 1, 1931, the person was living in St. George's Ward, Ottawa City, Carleton County, Province of Ontario, (137-94-C-25), was a female, single, 17 years of age, born in France, father foreign-born, mother Canadian-born, immigrated to this country in 1928, was an alien of German racial origin, can speak English and French, speaks German as mother tongue, was a member of the Lutheran Church, can read and write and attended school 9 months during the previous school year.

The "family and occupation card" was used for the purpose of compiling statistics relating to the Canadian home and family, as per headings and sub-headings of the card, such as class of dwelling, tenure, households, private families, number of children per family, literacy, school attendance, occupation, earnings of head, of wife and of children, unemployment, etc. The information on the card will furnish the material necessary for a close analysis of the Canadian family both from a social and an economic standpoint, also will permit a comprehensive study of the Canadian home including home ownership, rentals paid, number of rooms occupied, class of home, etc.

In addition to the above, various cards were used for the compilation of statistics relating to Agriculture, Blind and Deaf-mutes, Mental Institutions, Merchandising, Trading and Servicing Establishments, etc.

error in transcription, lay in the fact that only five columns out of twenty-odd on the census card could be cross-analysed at one time; the Bureau therefore had to exercise selection as to what cross-classifications of the items with each other could be completed within the limits of time and expenditure available. To overcome this, experiments were carried out in the Bureau for some time prior to the 1931 Census on the construction of a combined sorter and tabulator which, while completing any given sort, would automatically record *all* the items punched on the census card—at the same time enabling the results to be mechanically transcribed. These experiments met with success, and after an exacting test three sorter-tabulators were constructed in the Bureau's workshop during 1930-31 at a cost of approximately \$8,000 each. The idea of the machine was conceived and a rough model made by Mr. Fernand Belisle of the Mechanical Staff of the Bureau; the development, construction and testing was carried out under the direction of Mr. A. E. Thornton, Mechanical Superintendent of the Bureau.

The manner in which the new sorter-tabulator operates is briefly as follows: The cards for a given area are in the first instance put through the machine for a given sort—say, by ages. As this sort is being made, every fact on the card is simultaneously recorded. Thus at the end of the first sort a summation of all the individual facts collected by the census is available. The cards are then put through for the second sort—say, by birthplace, during which process each fact on the card is cross-classified automatically for each age group resulting from the first sort. At the end of a limited number of sorts, practically every fact on the census card is cross-classified with every other fact. These cross-classifications are recorded on a traverse dial from which transcription is made by photography.

The superior efficiency of this method as compared with its predecessor is indicated not merely by the number of columns handled by the new machines and the old respectively, but by the permutations of the cross-classification involved. In point of fact, the new machine represents a capacity in cross-analysis several thousands of times greater than the old,—a capacity that sets no practical limit on the number of classifications that can be made and placed on permanent record within the period allotted to the census compilation. It is estimated that the three sorter-tabulators built by the Bureau for the 1931 Census have in the two years in which they have been in use produced materials over fifty times as compendious as would have been possible with the equipment of 1921, and at materially lessened labour costs.

A gang-punch invented by Mr. Fernand Belisle and constructed in the Bureau has likewise increased by many times the efficiency of the previous gang-punch operated by hand. The Bureau's mechanical branch also developed and constructed during the past decade a new verifying machine, which has greatly facilitated the detection of errors in the punching process; the cards pass through this machine at a rate of 240 a minute, several hundred types of errors being detected. A counting device on the machine also checks the completeness of the work of the punching staff.

A more detailed description of each of the above-mentioned machines used in the Bureau in compiling the census, illustrated with photographs of the machines and of the different cards on which they operate, is as follows:—

**The Pantagraph Machine.**—This machine, which is used for punching the cards, has a perforated punch plate over which an index finger swings freely, its movement, after the manner of a pantagraph, being repeated at the rear by a punch superimposed on a die. The movement of the punch is limited between guides which form the card holder, the card being retained in place by a small clip. The card of course exactly corresponds with the punch plate; both are arranged so as to record the information in the order in which it appears on the census schedule. Thus, the operator reads from left to right, working across the punch plate as each fact is transferred to the card. The pantagraph, which has been in use since 1911, has the great advantage of not requiring the entries on the punch card to be coded.

**The Gang-Punch Machine.**—The gang-punch is used to punch one or more holes common to any group of cards. The cards are fed through the machine singly, each card being made to pause for a fraction of a second when the head containing the punches (these punches are readily changed to any combination) is pressed down upon it in contact with the dies below. The head returns and the card is released and travels through a contact which counts it. The machine punches 400 cards per minute. Since its first use a second set of punches has been installed at

the opposite end of the machine to suit the commercial card, which can thus be fed in the opposite direction and punched effectively.

**The Automatic Verification Machine.**—This machine feeds the cards from a stacker singly and automatically under a head equipped with 240 spring pins, one for each possible hole in the card. The pins are electrically wired so that current may pass down one and up another and so across the entire card, thus reading the card electrically. If the circuit is completed, a magnet is operated, which in turn opens an "O.K." box to receive the card and at the same time makes record on a counter. If the circuit is not completed, the magnet is not reached; the O.K. box in consequence does not open, and the card passes into a "reject" box and is counted on another counter. These two counters are in series with two total counters, one of which is used to accumulate the day's run. The rejected cards are at once examined and checked with the schedules, and new cards made for those that are found wrongly punched. "Rejects" are for the following sample reasons: incomplete information; out of gauge in one or more holes; inconsistent information, such as resident in Canada less than 5 years and naturalized; married but not of proper age; going to school but under 5 years of age or over 20 years of age, etc.; altogether over thirty inconsistent combinations are thus controlled. The inconsistencies are detected by electric relays placed in the different circuits to control the combinations that require verifying; for example, if a card is punched male and married, but also 15 years of age, the current closes a relay for the sex and another relay for the married indication, but these two relay points make a contact which is wired only to ages of over 20 years; all cards, therefore, of males recorded as married under 20 years of age are rejected for verification.

**The Sorter-Tabulator.**—This machine, which is the outstanding one of the series, sorts and tabulates at the same time. The sorter has been improved in several respects over the original commercial sorter—notably in that a number of columns related to each other can be sorted at the one time, or a combination of facts related to each other from several different columns can be selected for sortation at the one time, any desired combination being possible in this connection. For the tabulation, the sorter carries in the head a needle for each possible perforation in the card, with a counter wired to each needle, 240 in all. The counters are mounted on a large transverse panel board with thirteen to a row, the panel being lettered opposite each counter to agree with the card. Twenty additional counters, one for each column, are for totalizing purposes. Thus the machine sorts one fact or combination of facts and simultaneously tabulates all the other facts on the card at one time, obtaining in this way, after a limited number of sorts, cross-tabulations of all the facts on the card with each other. The information is taken from the panel board by photography; the letters and numbers on the panel board and counters are printed in white, upon a black background (thus reproducing black on white), while by using a prism lens, the figures are reproduced right side up. The panel board being of the cumbersome size of 32 x 48 inches, the photograph is reduced by one-half for convenience in handling by the tabulating staff and for filing. A quick-drying process permits of immediate use of the reproduction. The special advantages of the machine may be recapitulated as follows:—

- (1) The needle structure in the sorter-head insures a perfect sort.
- (2) The machine will sort any number of columns or groups of columns—*e.g.*, the five columns occupied by birthplace on the card may be sorted into the four groups—Canadian-born, British-born, foreign-born and born at sea—in one operation; this would ordinarily require five operations, with in addition the grouping of the cards.
- (3) It permits the combination of any facts desired—*e.g.*, from a group of cards it will pick out, say, all females married, Canadian-born, alien, sorting them into one group in one operation; this on the ordinary machine would require several operations.
- (4) The tabulator is permanently wired, and adaptable therefore without re-wiring or adjustment for any cross-classification or run of the cards including all 240 facts and 20 totals.
- (5) The machine covers the whole card in one operation, *i.e.*, twenty columns of twelve facts each. The largest capacity of any other similar machine known to the Bureau is sixty counters, while others have a capacity of thirty-six—which involves handling the cards from four to seven times for each run instead of once, with the additional necessity of assembling and adding the results.

While the machine has already achieved notable results, it is still only in the early stages of its development in the work of the Bureau. It is to be adapted within the near future to the compilation of vital statistics, and in future censuses to the occupational and agricultural features. Further improvements may enable it to complete more complex summations and additions that will render it available for any type of compilation work. The policy of the Bureau, however, is to embark on the construction of machinery only when it is unable to obtain appliances of equal efficiency from commercial concerns. The ultimate objective is to ensure that the large and costly investigations of a statistical nature which the Government must undertake from time to time shall yield the fullest possible measure of enlightenment through analytical and interpretive data upon the social and economic problems of the nation.

In Appendix VI an analysis is given of certain records which are maintained in the Bureau, of the clerks employed on the punching, verifying and tabulating machines, and generally in the mechanical operations of census compilation. Apart from its immediate purpose and interest, these records represent an opportunity of giving quantitative measurement of the training process—an opportunity rarely presented on so large a scale.

## §22. Plan of the Census Report

The final report of the census, in so far as it is possible to arrange in advance, will be issued in fourteen volumes, the first seven to be devoted to population, Volume VIII to the Census of Agriculture, Volume IX to the Census of Institutions, Volumes X and XI to the Census of Merchandising and Service Establishments, Volumes XII and XIII to a series of special studies and monographs on various subjects dealt with by the census, while a final volume will consist of a statistical atlas and series of charts, together with an index of the whole.

The volumes dealing with the Census of Agriculture, the Census of Institutions and the Census of Trading Establishments, respectively, will be self-contained, though co-ordinated with the rest of the census, but it is desirable to explain briefly the method followed in presenting the data regarding population in Volumes I to VII, involving as it does some departure from previous practice.

**Volume I: General Report.**—Volume I, in addition to the present administrative report on the census, consists of a series of summary chapters dealing in turn with each aspect of population covered in the census. (Chapters giving a summary of the Census of Agriculture, the Census of Institutions and the Census of Merchandising and Service Establishments, respectively, are added in order to render the review complete.) The opening chapter will deal with the growth of the Canadian population from the earliest times, while various features of census technique, such as the calculations of intercensal estimates of population, are relegated to appendices. An appendix is also devoted to a complete bibliography of census materials available in Canada, published and unpublished, from an early date, also a reproduction of the more salient figures for specified years chronologically arranged back to 1605. A further feature of the volume will be a series of life tables for the Dominion and for each province based on the census and the vital statistics of the census year.

**Volume II: Population by Areas.**—Straight summations of the data with regard to each subject covered in the Census of Population (age, birthplace, citizenship, religion, etc.) are set forth down to the smallest possible geographical areas in this volume, the information being given in parallel form and without cross-classification of any kind except that all totals are shown by sex; the division by rural and urban can also be traced throughout. The rural and urban segregations are made by two methods; first, in accordance with municipal law, which differs widely in its population requirements for "urban" municipalities from province to province; secondly, for purposes of general sociological research, by classifying as "urban" only such cities, towns and villages as have a population of 1,000 or over.

**Volume III: Ages.**—In Volume III, presentation of materials in cross-classification is begun, age (which is perhaps the most fundamental aspect of population for the present purpose), being taken as the basis, and being cross-classified with every other feature on the population schedule. Owing to the number of these cross-classifications, they can be shown only by the larger geographical areas, *i.e.*, by provinces; by rural and urban; by cities of 30,000 and over; and by groups of towns and villages, (namely, (a) 1,000 to 30,000 and (b) under 1,000). Sex is differentiated throughout.

**Volume IV: Extended Analysis.**—In this volume the process of cross-classification is carried forward, the following topics of the census schedule being dealt with, namely, sex, conjugal condition, birthplace, birthplace of parents, nationality, year of immigration, racial origin, religion, language, school attendance and illiteracy. All of these subjects are inter-classified wherever a relationship exists, again only by the larger areas as in the case of Volume III.

**Volume V: Families, Dwellings and Earnings.**—This volume presents an analysis of the census materials relating to families, dwellings, housing, earnings of families and individuals, dependency and contingent subjects of a broad social character, the scheme of cross-classification being of similar scope to that of Volume IV.

**Volume VI: Unemployment.**—A preliminary return of the census materials on unemployment as for June 1, 1931, for localities of 5,000 and over, was issued in April, 1932, and further returns have been made (a) extending this to places of 1,000, and (b) covering unemployment for the year ending June 1, 1931, by occupation, industry, sex and causes, for certain cities of 30,000 and over. It is the purpose of Volume VI to complete the presentation of these data in such a way as to permit an exhaustive study to be made of the subject from any angle covered by the census.

**Volume VII: Occupations and Industries.**—This volume presents statistics of the gainfully occupied by (a) occupation, and (b) industry, cross-classified by birthplace, race, age, sex, etc., for provinces and, in somewhat less detail, for cities 15,000 and over. In addition industry has been cross-classified by occupation, age and sex for Canada.

It will be observed from the preceding that the method of presenting the data with regard to population in Volumes I-VII, though dictated in part by the order and manner in which the various compilations have been completed, is also intended to emphasize the fact that the population problem must be envisaged as a whole rather than as a series of topics to be studied separately. The student of the statistics of birthplace, for example, will find in the appropriate chapter to Volume I a summary of the leading facts and cross-analyses relating thereto; in Volume II he will find the crude figures of birthplace by small areas throughout Canada; in Volume III he will find the ages of the population cross-classified with birthplace; while in Volumes IV, V, VI and VII he will find birthplace interrelated with the other questions on the census schedule, similarly, with regard to the other topics covered in the census inquiry. The presentation aims at a degree of completeness of cross-classification hitherto impracticable; at the same time not only is economy of printing achieved (any attempt at exhaustive presentation topic by topic would entail impossible repetitions of tabular matter), but the integration of the various census fields is suggested with what is thought to be a necessary insistence.

The reader may again be referred to Appendix V to the present Introduction, which gives a synoptical outline of the cross-classifications published in the seven volumes on population. It may also be repeated that in Appendix II to Chapter I of Volume I he will find a bibliography of all previous census materials, published and unpublished, which are considered of practical value in research.

**Volume VIII: Agriculture.**—The results of the Census of Agriculture will be given for each province in turn, down to township areas, the whole preceded by a general treatment for the Dominion showing provincial totals as well as Canada's position in world agriculture. The provincial sections will be issued separately for economy of distribution.

**Volume IX: Institutions.**—A separate report on each section of the Census of Institutions, namely (1) hospitals for the sick, (2) mental and neurological institutions, (3) prisons and reformatories, and (4) benevolent institutions, almshouses, orphanages, child welfare institutions, etc. will be included in this volume, with analytical introductions in each case, and with a preceding general summary in which the statistics of institutions as a whole will be analysed in their relation to other social statistics.

**Volumes X and XI: Merchandising and Service Establishments.**—The preliminary results of this census have been issued in mimeographed form for cities of 10,000 and over, also by counties and provinces, and by the more important kinds of business and types of organization. The census volumes will bring together the final results of the census, with an analytical introduction dealing with the facts and methods of distribution employed in the various lines of

trade throughout Canada, and relating the distribution process as a whole to the general economic scheme. It will be the purpose of the volume (which will be reprinted in provincial sections) to show in detail the more important channels of internal trade in Canada, the extent of the market for leading commodities or groups of commodities and generally to bridge the gap previously existing between on one hand the Census of Production, in association with imports and exports, and on the other hand the estimated consumption of commodities in Canada.

**Volumes XII, XIII and XIV: Census Monographs and Diagrams.**—The two final volumes of the census report, with the exception of the proposed statistical atlas and index, will be devoted to a series of special studies and monographs based upon the interpretation of the statistical data of the preceding volumes of the census report as well as of previous censuses. In each case the monograph will consist of a thorough study of an outstanding Canadian problem for which the census provides the primary approach. The studies will be issued separately, as well as being brought together in volume form. The volume of diagrams will illustrate the leading facts of social and economic importance derived from the Census and other Branches of the Bureau, constituting in effect a statistical atlas of the Dominion on somewhat similar lines to that for Western Canada published in 1931.

The list of the proposed monographs with a brief description of each as planned and in part completed on the date of the present report is as given below. It may be added that though certain of the monographs are related in subject, care will be taken to prevent overlapping in treatment so that the series will constitute an essential whole, especially when taken in conjunction with Volume I; the monographs, however, have been prepared and written independently (by joint hands in certain cases) but are under single editorial planning and supervision.

## §23. Census Monographs

**1. Growth of Population in Canada.**—An investigation of recent trends in the population growth of Canada against the general background of history—particularly since 1851—including in the purview natural increase, immigration and emigration. The movement of population within Canada will also be treated, and the progress of settlement traced. The study will aim at scientific examination of the laws of population growth in Canada, with reference to special features of the growth at different periods,—the whole against a world background and with comparisons for other countries which are developing (a) under similar conditions and environment, and (b) under different conditions.

**2. Age Distribution of the Canadian People.**—The age content of the population is, as already remarked, one of the most fundamentally important facts brought out by the census, accounting for many phases of mortality, conjugal condition, marriage, occupational status, crime, etc., that are frequently attributed to other origins. The study will cover past censuses for comparative purposes.

**3. Fertility of the Population.**—This study will examine the actual and potential fertility of the Canadian population by races, geographical areas, occupations, density of population, etc. It will be closely associated with the vital statistical records of the Bureau on ages of mothers, ages of the married population, order of births, the birth rate, etc. What are the factors determining the birth rate in Canada and its variation from time to time and from province to province? What will be the probable trend of the Canadian-born population of the next few decades? These and similar questions will be analysed.

**4. Origin, Language, Birthplace and Nationality of the Canadian People.**—A study of this subject based on the 1921 Census was issued by the Bureau some years ago. The concepts of origin, language, birthplace and nationality are closely associated and together constitute a problem of first national importance. It is possible to examine the situation more efficiently for the present census than for the last, owing to the greater wealth of analytical data available. The legalistic point of view as to nationality will receive additional emphasis, and additional examination will be made of racial demarcations in Canada.

**5. Illiteracy and Educational Status.**—The study made in 1921 will be repeated and improved in the light of the more complete analytical materials now available. The purpose is to examine all the factors contributing to the educational status of the Canadian community—local environment, age, sex, nativity, school facilities—and their progress in the elimination of illiteracy and the promotion of a higher educational level. The Education Branch of the Bureau will complete this study.

**6. The Rural and Urban Composition of the Canadian Population—since Confederation.**—This study will have for subject one of the most important of modern tendencies, namely, the rapid growth of urban as compared with rural population. The first part of the study will analyse the facts as shown by the seven censuses taken since Confederation, while a second part will be concerned with the causes of the greater urban growth.

**7. The Canadian Family—Its Composition, Size and Condition from the Earliest Times.**—The present census has made extensive provision for the treatment of this subject. From the *social* standpoint the treatment will include such features as the ages and educational status of the heads of families; the size and composition of the family; adoptions, etc. From the *economic* standpoint it will include earnings of parents and children, nature of employment, character of the household, etc. A study of the Canadian home in its larger aspects, including home-ownership, will be appended.

**8. Housing and Rentals.**—The preceding study will merge with one bearing explicitly on housing and rentals—the study including a treatment of the basic living conditions of Canadians, numbers of rooms occupied, home facilities and conveniences, tenancy, rentals paid, etc., from various points of view.

**9. Dependency.**—In the census volume giving the results of the Census of Institutions, the institutional population of Canada is dealt with—this covers the population which is being directly cared for in benevolent and other institutions of various kinds. There is need, however, for a wider treatment of dependency, including such phases as the dependency of children within the family, guardianship, dependent adults at home, etc., as well as a treatment of the responsibility for dependents which attaches to the population as a whole. The treatment will envisage such aspects as old age pensions, mothers' allowances, war pensions, allowances arising out of industrial accidents, as well as the activities of children's aid societies, etc., as covered in the Census of Institutions, and will relate existing data on these subjects to the various aspects of the census bearing on age, occupations and social conditions generally. In the past two decades governmental expenditures of the classes above mentioned have greatly increased; to illustrate the human background of legislation and budgeting of this character, and to throw light in a broad way on the foundation of social legislation in general, will be the objective of this monograph.

**10. The Evolution and Present-day Significance of the Canadian Occupational Structure.**—By way of introduction, brief reference will be made to the factors, such as physical environment, technical developments, social policies, etc., that have moulded the occupational structure in its present form. A quantitative description of the changes that have occurred in the occupational scene over the past half century will follow. This survey will include an examination of (a) the extent to which the division of labour has been carried, (b) the relative growth of specific occupations and occupational groups, (c) the changing sex composition and age distribution of the gainfully occupied, (d) the occupational mobility of the immigrant worker, and so on. The preceding analysis it is expected will furnish valuable knowledge upon a number of problems of present-day significance in respect to the occupational life of this country. Among these may be mentioned (a) occupational overcrowding, (b) technological displacement, (c) vocational adaptability of the immigrant, and (d) juvenile and female labour.

**11. Unemployment.**—The basic purpose of this monograph will be to study those aspects of unemployment for which the census provides the primary avenues of approach. This involves a study of unemployment by cause, occupation, earnings, industry, sex, age, race, etc., with implied examination of various interpretations of the phenomenon. The census data will be correlated with all other data available on unemployment so as to measure their applicability. The whole will be prefaced by a theoretical treatment of the subject.



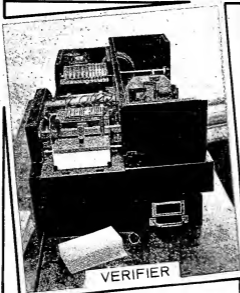
GENERAL



REVISION ROOM



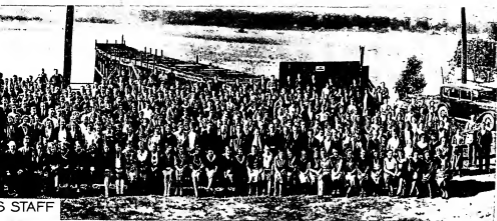
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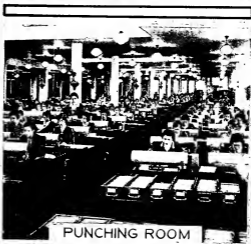
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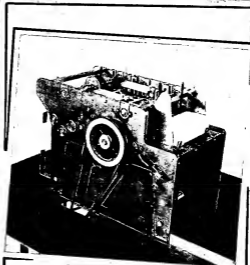
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HINES



PUNCHING ROOM



GANG-PUNCHER

**12. The Population Basis of Agriculture.**—To what extent does the composition of the Canadian population account for the trend in Canadian agriculture and for certain special forms which Canadian agriculture has assumed? What is the relation between "types" of farming and the population based thereon? The 1931 Census collected certain new materials on the farming population. While the main direction of agricultural evolution has been dictated by broad economic considerations, other forces have also been at work, and it will be the main purpose of this study to envisage these from as wide an angle as possible.

## §24. Distribution of Census Reports

The chief cost items in connection with the census are for the collection and compilation of the data rather than for the printing of the reports, the outlay upon the latter totalling at the outside less than four or five per cent of the whole. Nevertheless, the cost of printing is heavy, and a rigid supervision of distribution is obligatory, desirable as is a wide dissemination of results and materials so essential to the study of national problems. The free distribution of the census reports will accordingly be limited to the following:—(1) Canadian libraries of recognized standing; (2) Dominion and Provincial Government Departments, City Clerks, on application; (3) Members of Parliament, Members of Provincial Legislatures and other public officers, on application; (4) University faculties in the social sciences; (5) Boards of Trade and Chambers of Commerce on application; (6) Foreign Census and Statistical Departments, in exchange for their similar publications; (7) large and representative foreign libraries; (8) leading newspapers for review.

## §25. Summary of Census Results

The present report is purely administrative, but it cannot as such conclude without reference however brief to the results of the census—first as to the broad facts in the national development which it indicates, and secondly in its bearing upon the immediate legal objective, namely, representation in the House of Commons. In the remainder of this report these two phases are discussed in turn. The statement of results, it will be understood, is limited to general totals.

## §26. Summary of the Results of the Census of Population, 1931

### (a) Growth

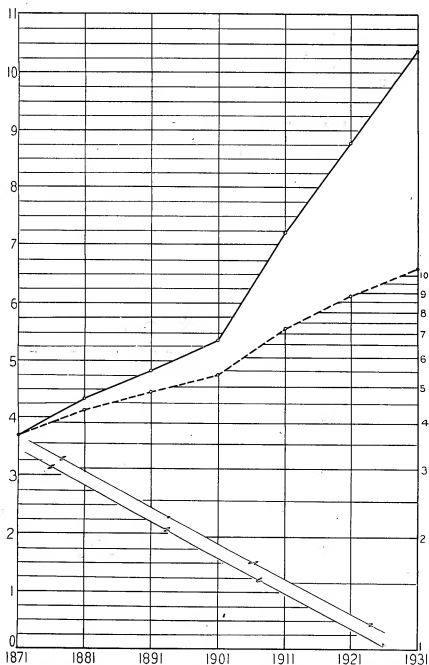
By way of general summary, the three tables reprinted herewith show the population totals by provinces according to each decennial census since Confederation, and thus exhibit the totals of the present census in their appropriate setting. The diagram opposite will also enable the trend of population in Canada to be seen at a glance from Confederation on, while the dotted map which appears as frontispiece to the present volume illustrates the present distribution of the people throughout the Dominion.

POPULATION OF CANADA, BY PROVINCES AND TERRITORIES, IN THE CENSUS YEARS 1871 TO 1931

Province or Territory	1871	1881	1891	1901	1911	1921	1931
	No.	No.	No.	No.	No.	No.	No.
Prince Edward Island.....	94,021	108,801	109,078	103,259	93,728	88,615	88,038
Nova Scotia.....	387,800	440,572	450,396	459,574	492,338	523,837	512,846
New Brunswick.....	288,504	321,233	321,263	331,120	351,889	387,876	408,219
Quebec.....	1,191,516	1,359,027	1,488,535	1,648,398	1,906,776	2,300,665	2,874,255
Ontario.....	1,620,851	1,926,922	2,114,321	2,182,947	2,527,292	2,953,052	3,451,683
Manitoba.....	25,228	62,260	152,506	255,211	461,394	610,118	700,139
Saskatchewan.....	-	-	-	91,279	492,432	757,510	921,785
Alberta.....	-	-	-	73,022	374,295	588,454	731,605
British Columbia.....	36,247	49,459	98,173	178,657	392,480	524,582	694,293
Yukon.....	-	-	-	27,219	8,512	4,157	4,230
Northwest Territories <sup>1</sup> .....	48,000	56,446	98,967	20,129	16,507	7,988	9,723
Royal Canadian Navy.....	-	-	-	-	-	485	*
<b>Totals.....</b>	<b>3,689,257</b>	<b>4,324,810</b>	<b>4,833,239</b>	<b>5,371,315</b>	<b>7,206,643</b>	<b>(<sup>4</sup>) 8,787,949</b>	<b>10,376,756</b>

<sup>1</sup>Corrected as a result of the Extension of Boundaries Act, 1912. <sup>2</sup>Corrected by transfer of population of Fort Smith (368) to Northwest Territories. <sup>3</sup>The decreases shown in the population of the Northwest Territories since 1891 are due to the separation therefrom of vast areas to form Alberta, Saskatchewan and Yukon and to extend the boundaries of Quebec, Ontario and Manitoba. <sup>4</sup>Revised in accordance with the Labrador award of the Privy Council, Mar. 1, 1927. \*Members of the Royal Canadian Navy were counted in their homes in the Census of 1931.

## POPULATION OF CANADA 1871-1931



The solid line is on an ordinary scale representing 'Actual Growth' the dotted is on a logarithmic scale representing 'Relative Growth' from decade to decade. The figures opposite each line represent millions on their respective scales.

## CENSUS OF CANADA, 1931

## PERCENTAGE DISTRIBUTION OF CANADIAN POPULATION, BY PROVINCES AND TERRITORIES, 1871 TO 1931

Province or Territory	1871	1881	1891	1901	1911	1921	1931
	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.	p.c.
Prince Edward Island.....	2.55	2.52	2.25	1.92	1.30	1.01	0.85
Nova Scotia.....	10.51	10.19	9.32	8.56	6.83	5.96	4.94
New Brunswick.....	7.74	7.43	6.65	6.16	4.88	4.41	3.94
Quebec.....	32.30	31.42	30.80	30.70	27.83	26.86	27.70
Ontario.....	43.94	44.56	43.74	40.64	35.07	33.35	33.07
Manitoba.....	0.68	1.44	3.16	4.75	6.40	6.94	6.75
Saskatchewan.....	-	-	-	1.70	6.84	8.62	8.88
Alberta.....	-	-	-	1.36	5.19	6.70	7.05
British Columbia.....	0.95	1.14	2.03	3.33	5.45	5.97	6.69
Yukon.....	-	-	-	0.51	0.12	0.05	0.04
Northwest Territories <sup>1</sup> .....	1.30	1.30	2.05	0.37	0.09	0.09	0.09
<b>Totals.....</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

## POPULATION OF CANADA, BY PROVINCES AND TERRITORIES, IN 1871 AND 1931, NUMERICAL INCREASE IN EACH DECADE FROM 1871 TO 1931 AND TOTAL INCREASE

Province or Territory	Population in 1871	Increase in each Decade from 1871 to 1931							Population in 1931	Increase, 1871 to 1931
		1871 to 1881	1881 to 1891	1891 to 1901	1901 to 1911	1911 to 1921	1921 to 1931			
		No.	No.	No.	No.	No.	No.			
Prince Edward Island...	94,021	14,870	187	-5,819	-9,531	-5,113	-577	88,038	-5,083	
Nova Scotia.....	337,500	52,772	9,824	9,178	32,764	31,499	-10,991	512,546	125,046	
New Brunswick.....	285,594	35,639	30	9,857	20,769	35,987	20,343	408,219	122,625	
Quebec.....	1,191,516	167,511	129,508	160,363	356,878	354,889	513,590	2,874,255	1,682,739	
Ontario.....	1,620,851	306,071	187,399	68,626	344,345	406,370	498,021	3,431,683	1,810,832	
Manitoba.....	25,228	37,032	90,246	102,705	206,183	148,724	60,021	700,139	674,911	
Saskatchewan.....	-	-	-	91,279	401,153	265,078	164,275	921,788	921,788	
Alberta.....	-	-	-	73,022	301,273	214,159	143,151	731,605	731,605	
British Columbia.....	36,247	13,212	48,714	80,484	213,828	132,102	169,681	694,263	658,016	
Yukon.....	-	-	-	27,219	-18,707	-4,355	73	4,230	4,230	
Northwest Territories <sup>2</sup> .....	48,000	8,446	42,521	-78,838	-13,622	1,481	1,735	9,723	-38,277	
Royal Canadian Navy.....	-	-	-	-	-	485	-	-	-	
<b>Totals.....</b>	<b>3,689,257</b>	<b>635,553</b>	<b>508,429</b>	<b>538,076</b>	<b>1,835,328</b>	<b>1,591,306</b>	<b>1,588,837</b>	<b>10,376,786</b>	<b>6,687,529</b>	

<sup>1</sup>Corrected as a result of the Extension of Boundaries Act, 1912. <sup>2</sup>Corrected by transfer of population of Fort Smith (368) to Northwest Territories. <sup>3</sup>The decreases shown in the population of the Northwest Territories since 1891 are due to the separation therefrom of vast areas to form Alberta, Saskatchewan and Yukon and to extend the boundaries of Quebec, Ontario and Manitoba. <sup>4</sup>Revised in accordance with the Labrador award of the Privy Council, Mar. 1, 1927. <sup>5</sup>Members of the Royal Canadian Navy were counted in their homes in the Census of 1931.

**Grand Total of the Census of 1931.**—According to the final results of the 1931 Census, the total population of the Dominion on June 1, 1931, was 10,376,786, as compared with 8,787,949 in the same area on June 1, 1921, an increase of 1,588,837 or 18.08 p.c. in the decade, as compared with 21.94 p.c. and 34.17 p.c. during the decades 1911 to 1921 and 1901 to 1911 respectively. It is interesting to compare this record with the similar figures of growth elsewhere.

**Recent Population Growth of the English-Speaking Countries and the World.**—During the decade 1911-21 the white man's countries included in the British Empire had suffered less in actual loss of life from the Great War and its consequences than the continental countries of Europe. So likewise did the United States, which was in the War for only nineteen months as against Canada's fifty-two. None of these declined in population during that period, as many continental European countries did. Their percentage increases, however, were in almost all cases lower than in the previous decade. Thus the population of England and Wales increased between 1911 and 1921 only from 36,070,492 to 37,886,099, or 5 p.c., as compared with an increase of 10.9 p.c. in the previous decade; Scotland, again, increased only from 4,760,904 to 4,882,497, or 2.6 p.c., as compared with 6.5 p.c. between 1901 and 1911. Canada increased 21.94 p.c. as compared with 34.17 p.c. between 1901 and 1911, while New Zealand increased by 20.9 p.c. as compared with 30.5 p.c. On the other hand, the Commonwealth of Australia, the only Dominion to grow more rapidly in the second decade than in the first, increased by 22.01 p.c., as compared with 18.05 p.c. between 1901 and 1911. The white population of the Union of South Africa increased by 19.06 p.c. in the second decade of the century. Finally, the population of the continental United States rose from 91,972,266 in 1910 to 105,710,620 in 1920, an increase of 14.9 p.c. in the second decade as compared with 21 p.c. in the first.

The third decade of the century might have been expected to show a larger increase of population than the second, but so far as the English-speaking countries were concerned, the facts were otherwise owing largely to a falling birth rate. Thus the increase in Canada was only 18.08 p.c. as compared with 21.94 p.c. England and Wales, it is true, grew 5.4 p.c. as compared with 5 p.c. in the preceding decade, but Scotland showed an actual decline of 0.8 p.c. in the third decade as compared with an increase of 2.6 p.c. in the second. In Ireland, where no census was taken between 1911 and 1926, and none since, Northern Ireland showed an increase of 0.5 p.c. between 1911 and 1926 as compared with an increase of 1.1 p.c. between 1901 and 1911, while the Free State Census of 1926 recorded a decline of 3.7 p.c. between 1911 and 1926, as compared with a decline of 2.6 p.c. between 1901 and 1911. The Commonwealth of Australia took no census in 1931, but the Census of 1933 showed an increase of 22 p.c. since 1921, or about the same percentage in these last twelve years as in the preceding ten. New Zealand, too, took no census in 1931, but an official estimate of the European population indicates an increase of 20.3 p.c. between 1921 and 1933 or nearly the same as between 1911 and 1921. The white population of the Union of South Africa increased 21.87 p.c. between 1921 and 1931. Finally, the mainly English-speaking continental United States increased 16.1 p.c. or from 105,710,620 to 122,775,046 between 1920 and 1930.

Considering the British Empire as a whole, the aggregate population of the territories now included in it, which is estimated at 424,133,000 in 1911 and 449,719,000 in 1921, rose to 495,456,000 (Statesman's Year Book figure) in 1931, the chief factor in this increase of nearly 45,000,000 during the decade being the rise of some 33,895,000 in the population of India.

Estimates of the population of the world, published by the International Institute of Statistics, indicate that the population of Europe, which was 448,086,000 in 1910, rose only slightly to 450,023,000 in 1920, but increased substantially to 484,575,000 in 1930, while the world total, which was 1,698,082,000 in 1910, rose to 1,788,079,000 in 1920 and 1,988,279,000 in 1930. The comparatively small increase observed between 1910 and 1920 was due to the Malthusian checks of war and pestilence. The latest edition of the Statistical Year Book of the League of Nations estimates the total population of the world at the end of 1932 at 2,041,600,000. Absolute comparability between the estimates of semi-civilized or barbarian communities where there is no authoritative enumeration of the people is unattainable. Differences of time at which estimates are made is also an important cause of incomparability.

**Totals by Provinces, 1921-1931.**—The largest absolute gain made by any province of Canada during the past decade was by Quebec (513,590), which compares with Ontario's gain of 498,021, but British Columbia and Alberta made higher relative gains, namely, 32.35 p.c. and 24.33 p.c., respectively, compared with Quebec's gain of 21.76 p.c., Saskatchewan's gain of 21.69 p.c., Ontario's gain of 16.98 p.c., and Manitoba's gain of 14.75 p.c. Prince Edward Island lost population for the fourth census in succession (577 or 0.65 p.c.), while Nova Scotia for the first time of any other province since Confederation also recorded a loss (10,991 or 2.10 p.c.).

As formerly in the United States, the West has been growing more rapidly than the East. In the decade from 1911 to 1921 this was clearly apparent, for the four western provinces then increased their population by no less than 44 p.c., and for the decade 1921-31 the increase was from 2,480,664 to 3,047,792, or 22.86 p.c. From 1921 to 1931 the five eastern provinces increased from 6,294,655 to 7,315,041, an increase of 1,020,386 persons, which, though absolutely larger than the figure for the West, constitutes an increase of only 16.2 p.c. over the 1921 population. While in 1871 only 2.97 p.c. and in 1881 only 3.89 p.c. of the population of the country dwelt west of the Lake of the Woods, the percentage in 1891 was 7.23; in 1901, 12.02; in 1911, 24.08; in 1921, 28.37; and in 1931, 29.51.

On the other hand, the Maritime Provinces, which in 1871 contained 20.80 p.c. of the total population of the Dominion, had in 1881 20.13 p.c., in 1891 18.22 p.c., in 1901 16.64 p.c., in 1911 13.02 p.c., in 1921 11.38 p.c., and in 1931 only 9.72 p.c. of the population. Ontario and Quebec, the pre-Confederation Province of Canada, still remain the chief centre of population, but their relative place continues to diminish. Their proportion of the total was 60.77 p.c. in 1931, as compared with 76.23 p.c. in 1871, 75.98 p.c. in 1881, 74.54 p.c. in 1891, 71.34 p.c. in 1901, 62.90 p.c. in 1911 and 60.25 p.c. in 1921. In other words, the net result of the sixty years has been that in 1931 three-fifths of the population of the Dominion lived in these provinces as compared with more than three-fourths in 1871.

From 1851 to 1881 the "centre" of population east and west did not change materially, remaining around the city of Valleyfield, Quebec, for thirty years, but in 1891 it had moved twenty-five miles west of Ottawa and in 1901 the northwest movement carried it near Pembroke, Ontario. In 1911 the centre of population had moved to a spot fifty-five miles west of Sudbury, Ontario, and in 1921 with the same northwest movement it had reached fifty miles northeast of Sault Ste. Marie. In 1931 the "centre" of population was located thirty miles due north of Sault Ste. Marie.

LOCATION OF CENTRE OF POPULATION FROM 1851 TO 1931 IN NUMBER OF MILES NORTH OF 42° LAT. AND WEST OF 60° LONG.

Years	Exact location in degrees		Number of miles		Movement between censuses (Miles)	
	N. Lat.	W. Long.	N. of 42°	W. of 60°	N.	W.
1851.....	45-35	74-17	231	662	-	-
1861.....	45-25	74-33	224	700	-7	8
1871.....	45-23	74-53	223	710	-1	10
1881.....	45-28	74-94	226	730	3	20
1891.....	45-45	76-05	228	784	12	54
1901.....	45-74	77-31	258	845	20	61
1911.....	46-57	81-00	315	1,042	57	197
1921.....	46-84	83-49	334	1,113	19	71
1931.....	46-06	84-17	342	1,143	8	30

The movement of the Canadian-born within Canada has interesting implications, which will be analysed in detail in Chapter I of Vol. I of the Census Report and in the monograph on Population Growth.

**Density of Population:**—The density of population in 1931 (i.e., the number of persons per square mile of the land area as in that year), as compared with 1921 and 1911, is shown by provinces and for the country as a whole in the table herewith. Generally speaking the density of population decreases as one travels westward, but the enormous area of the province of Quebec unduly reduces the density of its population, which was 5.49 in 1931. As among the nine provinces, the density of population is greatest in Prince Edward Island and least in British Columbia.

DENSITY OF POPULATION IN CANADA, BY PROVINCES AND TERRITORIES, 1911, 1921 AND 1931

NOTE.—Densities are for revised land areas as in 1933

Province	1911	1921	1931	Province or Territory	1911	1921	1931
Prince Edward Island.....	42.92	40.57	40.31	Alberta.....	1.50	2.37	2.94
Nova Scotia.....	23.74	25.25	24.72	British Columbia.....	1.09	1.46	1.93
New Brunswick.....	12.70	14.00	14.73	<b>Canada, Exclusive of the Territories.....</b>	<b>3.59</b>	<b>4.38</b>	<b>5.17</b>
Quebec.....	3.83	4.51	5.49	Yukon.....	0.04	0.02	0.02
Ontario.....	6.96	8.08	9.45	Northwest Territories.....	0.01	0.006	0.007
Manitoba.....	2.10	2.78	3.19	<b>Canada.....</b>	<b>2.68</b>	<b>2.53</b>	<b>2.99</b>
Saskatchewan.....	2.07	3.18	3.87				

**Elements of Growth.**—The former lack of comprehensive and comparable vital statistics for the whole of Canada, together with the lack of statistics of emigration, makes it difficult to determine how far the growth of population since the commencement of the twentieth century is due to natural increase and how far to immigration. The estimate in the accompanying table may, however, be of interest. It will be seen that to a potential gain of 2,834,392, during 1921-1931, the two rival factors of natural increase and immigration contributed 1,325,256 and 1,509,136, respectively, but were counterbalanced by an emigration of 1,245,555 which reduced the net gain to 1,588,837.

MOVEMENT OF POPULATION, INCLUDING ESTIMATED NATURAL INCREASE, RECORDED IMMIGRATION AND ESTIMATED EMIGRATION, FOR THE INTER-CENSAL PERIODS 1901-11, 1911-21 AND 1921-31.

Decade and Item	No.
<b>Decade 1901-1911—</b>	
Population, Census of April 1, 1901.....	5,371,315
Natural increase (1901-1911), estimated.....	853,566
Immigration (April 1, 1901, to May 31, 1911).....	1,847,651
<b>Total.....</b>	<b>8,072,532</b>
Population, Census of June 1, 1911.....	7,206,643
Emigration (April 1, 1901, to May 31, 1911), estimated.....	865,889
<b>Decade 1911-1921—</b>	
Population, Census of June 1, 1911.....	7,206,643
Natural increase (1911-1921), estimated.....	1,150,125
Immigration (June 1, 1911, to May 31, 1921).....	1,728,921
<b>Total.....</b>	<b>10,085,689</b>
Population, Census of June 1, 1921.....	8,787,949
Emigration (June 1, 1911, to May 31, 1921) estimated.....	1,297,740
<b>Decade 1921-1931—</b>	
Population, Census of June 1, 1921.....	8,787,949
Natural increase (1921-1931), partly estimated for the years 1921-25 in the case of Quebec.....	1,325,256
Immigration (June 1, 1921, to May 31, 1931), including 288,874 returned Canadians.....	1,509,138
<b>Total.....</b>	<b>11,622,341</b>
Population, Census of June 1, 1931.....	10,376,786
Emigration (June 1, 1921 to May 31, 1931), estimated.....	1,245,555
Net gain in population, 1901-1911.....	1,835,328
Net gain in population, 1911-1921.....	1,581,306
Net gain in population, 1921-1931.....	1,588,837

<sup>1</sup>Revised in accordance with the Labrador award of the Privy Council, Mar. 1, 1927.

<sup>2</sup>This figure includes also the 60,000 Canadian lives lost at the front and the soldiers (about 20,000) enlisting in the Canadian forces and receiving their discharge in the United Kingdom.

**Outline of Population Growth from the Earliest Times in Canada.**—A general account of population expansion in Canada from the earliest times, in which the latest episode is that dealt with by the present census, may be of interest at this point, though as already remarked the subject will be given exhaustive treatment in the opening chapter of the Census Report proper, to which the reader must be referred for interpretative details.

**Historical—Early Colonial Period.**—Canada, a part of the New World, came into existence in the seventeenth century as a symptom of a new and powerful influence fraught with consequences of the utmost importance to mankind, namely, a pronounced and continuously mounting increase in the numbers of the human family—in at least the portion included in western civilization. For six centuries prior to 1600, the growth of Europe had been negligible. In the seventeenth century it suddenly expanded to a rate of, say, 33½ p.c., and in the eighteenth century to one of, say, 50 p.c. In the nineteenth century the fire became a marching conflagration, and an increase of over 300 p.c. was recorded within the period of one hundred years.

Canada, as already described, took her first census in the year 1666, when the results showed some 3,215 souls. By 1685 this total had risen to over 11,000; by the end of the seventeenth century it had passed 15,000; and the latter was all but doubled in the succeeding twenty-five years. By 1740 the figure was well in advance of 40,000, whilst at the time of the British Conquest (1763), the population of New France was in the neighbourhood of 70,000—another 10,000 French (thinned to these proportions by the expulsion of the Acadians) being scattered through what is now New Brunswick, Nova Scotia and Prince Edward Island. The British population of Nova Scotia was at this time in the neighbourhood of 9,000. Meanwhile, it is interesting to note, the English colonies which constituted the beginnings of the United States grew from 80,000 in 1660 to 262,000 in 1700, to 500,000 in 1720, to 1,000,000 in 1740 and to 1,695,000 (including 310,000 slaves) in 1760.\*

British settlement on a considerable scale in the Maritime Provinces and in what subsequently became the province of Ontario dates only from the Loyalist movement which began with the outbreak of the American Revolution and increased after its close. In the year of the

\* See History and Growth of the United States Census, by Carroll D. Wright, Washington, 1900.

Constitution Act (1791), the population of Lower Canada may be set down as 163,000, whilst that of the newly constituted province of Upper Canada was perhaps 15,000. (In the previous year, the first census of the United States gave a total of 3,929,214). With the addition of the Maritime Provinces, the grand total in 1791 exceeded 220,000. A decade later, at the beginning of the nineteenth century, with the tide of immigration which the new Act released from the United States and Great Britain, this total had risen to at least 300,000. From then on until the union of the provinces, growth was continuous; by the early 'forties Upper and Lower Canada with the Maritime Provinces contained over a million and a half people.

**Modern Censuses, 1851-1921.**—Census-taking at regular decennial intervals dates from 1851. With regard to the pre-Confederation Censuses of 1851 and 1861 respectively, the growth recorded was from a total of 2,440,000 in the former year to one of 3,248,000 in the latter, an increase of 808,000, or 33.1 p.c., the gain being particularly marked in Ontario, where railway expansion and general settlement were very active, especially in the first half of the decade. Between 1861 and 1871 the gain dropped to 427,000, or 13 p.c.

In the years immediately following Confederation there was again a rapid rise in numbers, the increase between 1871 and 1881 being 635,553, or 17.23 p.c. In neither of the two decades next following, however, was this record equalled, either absolutely or relatively, the gains being 508,429 and 538,076, or 11.76 p.c. and 11.13 p.c. respectively. With the end of the century the population of Canada had reached approximately five and three-eighths millions. The general increase among European populations during the nineteenth century was approximately three times; Canada equalled this rate of progress during the last sixty years alone.

It was, however, with the present century that the most spectacular expansion of the Canadian population began. The outstanding feature was of course the opening to settlement of the "last best West," which became the main attraction for the migration of old-world peoples, under the favourable financial conditions of 1900-1912. The unorganized territories of British North America had been ceded to the Dominion soon after Confederation, and the West had been tapped and traversed by the Canadian Pacific Railway in the 'eighties and 'nineties. But though western population doubled with each of these decades, it was only with the launching of a large-scale immigration movement after 1900 that Canadian western settlement and production became a world economic factor. Simultaneously an almost equally striking development occurred in the industrial centres of Eastern Canada, which formed the immediate basis for the move upon the West. At the back, of course, was a heavy inflow of British capital—a total of two and a half billions of dollars within a dozen years—which went to finance the large constructive undertakings (chiefly railway and municipal) which characterized the movement. Canadian immigration, which had previously run well under 50,000 per annum, rose rapidly to over five times that volume, eventually passing 400,000 in a single year. In the ten years 1900 to 1910 it totalled over 1,800,000, and though at least half this number was subsequently lost, and though the remainder were probably a cause of losses otherwise, it formed the chief factor in the gain of 34.17 p.c. (of the 125,000 who immigrated in the last five months of the decade at least 100,000 had arrived in the extended period caused by the change in the census date from April to June) all-round which the total population of Canada registered in that decade and which was larger relatively than the growth of any other country during the same period.

**The Decade 1911-1921.**—The continuation and even intensification of this movement for a period of three years, followed by a recession and then by the wholly new and unexpected development engendered by the War, was reflected in the 1921 Census. The net result was an increase of 1,581,840, which though less than the 1,835,328 increase of the preceding decade, was between two and three times greater than in any other decade in Canada's history. The relative increase of the Canadian population again headed the list for all countries in the world with the single exception of Australia (and that by a negligible margin), the rate being 21.95 p.c., compared with one of 22.01 for Australia, of 20.9 for New Zealand, of 15.99 for South Africa, and of 14.9 for the United States.

The effects of the War upon the Canadian population were both direct and indirect. Nearly 60,000 Canadians died overseas, and approximately 20,000 took their discharge in the United Kingdom. To these may be added 50,000 deaths from the war plague, influenza. In addition large numbers of British residents in Canada, most of them recent immigrants, left Canada to

join the forces of Great Britain and did not return, and the same is true of enemy nationals who passed in considerable numbers into the United States immediately before and after the declaration of hostilities. The fluidity of the Canadian population accordingly rendered the War costly in personnel far beyond actual casualties.

### (b) Elements in the 1931 Population

The above brings us to 1931 and to the decade covered by the present census with a review of which this summary of results began. For the remainder we may turn to specific characteristics or elements in the population content of 1931 according to the census, on which notes in briefest form are given in the following.

**Sex Distribution.**—Throughout the older countries of the world there is usually found an excess of female over male population, especially as in most of these countries the census is taken on a *de facto* instead of, as in Canada, on a *de jure* basis. The causes of this excess of female population are: (1) the normally higher rate of mortality among males; (2) the greater number of males who travel; (3) the effects of war; (4) the employment of males in the army, navy and merchant marine; and (5) the preponderance of males among emigrants. In the newer countries on the other hand the preponderance of males among immigrants results in a general excess of male over female population. In Canada there has been an excess of male population from the commencement, the Census of 1666 showing 2,034 males to only 1,181 females. As the colony increased in numbers, the disproportion between the sexes became smaller, especially since the French-Canadian population, after about 1680, was not reinforced by immigration from the old world. In 1784, when the English-speaking immigration to Canada for purposes of settlement was commencing, there were 54,064 males and 50,759 females in the colony. At the middle of the nineteenth century, there were 449,967 males to 440,294 females in Lower Canada, and 499,067 males to 452,937 females in the more newly-settled Upper Canada, and since Confederation the same phenomenon of considerable excess of males has occurred throughout the growing West. The great immigration of the first decade of the present century resulted in raising the "masculinity" of the Canadian population (*i.e.*, the excess of males over females per 100 of population) to the highest point in recent history, *viz.*, 6.07 p.c. in 1911. The Great War, however, both checked immigration and took about 60,000 Canadian male lives as its toll, with the result that at the Census of 1921 the masculinity of the population was only 3 p.c.—515 males to 485 females per 1,000 of population. In 1931 there were 518 males to 482 females for Canada as a whole. It is interesting to note that the masculinity of the population has recently increased in the eastern provinces and decreased in the western ones, where it was formerly greatest.

### MASCULINITY OF THE POPULATIONS OF VARIOUS COUNTRIES IN RECENT YEARS

NOTE—The minus sign (—) indicates deficiency of males

Country	Year	Excess of Males over Females in each 100 Population	Country	Year	Excess of Males over Females in each 100 Population
Argentina.....	1928	6.57	Sweden.....	1930	-1.53
Canada.....	1931	3.49	Denmark.....	1930	-2.20
India.....	1931	3.07	Italy.....	1931	-2.27
New Zealand.....	1931	2.18	Norway.....	1930	-2.63
Australia.....	1931	1.88	Finland.....	1920	-2.67
Union of South Africa <sup>1</sup> .....	1931	1.80	Germany.....	1925	-3.14
Irish Free State.....	1929	1.56	Northern Ireland.....	1926	-3.26
United States.....	1930	1.22	Poland.....	1921	-3.37
Japan.....	1930	0.51	Switzerland.....	1930	-3.65
Bulgaria.....	1926	0.12	Scotland.....	1931	-3.94
Netherlands.....	1930	-0.62	France.....	1926	-4.00
Greece.....	1928	-0.84	England and Wales.....	1931	-4.18
Belgium.....	1930	-0.96	Austria.....	1920	-4.23
Chile.....	1930	-0.98	U.S.S.R. (in Europe).....	1926	-4.89
Spain.....	1930	-1.32	Portugal.....	1930	-6.81

<sup>1</sup> White population only.

**Conjugal Condition.**—Especially noticeable in the 1931 Census of the single, married, widowed and divorced is the larger proportion of married in recent years. In 1871, 30.78 p.c. of the male and 31.50 p.c. of the female population were married; these percentages have increased from census to census till today they are 37.83 p.c. and 38.74 p.c., respectively. This is mainly attributable to the larger percentage of adults to total population in our own time. Noteworthy also is the larger percentage of divorced and legally separated in recent censuses, though this was stationary for males and somewhat smaller for females in 1931 compared with 1921.

**The Canadian Family.**—The census includes (1) the "household," comprising a group of persons living together in the same dwelling house, and (2) the private family, composed of father, mother and children.

In 1931 there were in Canada 2,266,724 households (exclusive of the Yukon and the Northwest Territories), compared with 1,897,227 in 1921. These households occupied 1,984,286 dwellings, comprising 2,214,043 structurally separate units. A structurally separate unit is defined for the census as "any room or set of rooms used for habitation, having separate access either to the street or to a common landing"; thus each apartment in an apartment building or flat in a block of flats is reported as a separate unit. Of the 2,214,043 structurally separate units, 354,326 were represented by apartments or flats; 31,930 by rows or terraces; 1,678,322 by single houses; 141,839 by semi-detached houses; 7,626 various and not specified. The material of construction of the dwelling houses included 459,646 brick and brick veneer; 31,391 stone; 1,394,894 wood; 76,105 stucco; 14,088 cement brick, and 9,161 others and not specified.

In the Census of 1931 the private families numbered 2,419,360, as against 2,001,512 in 1921. The conjugal condition of the heads of the private families was as follows: 169,172 were single, 1,960,418 married, 285,625 widowed and 4,145 divorced. Of the total number of private families, 1,669,634 reported children living at home, 161,879 reported dependents other than children, and 680,391 were without dependents or children living at home; of the latter, 270,312 were families of one person.

The 1921 Census compiled for the first time the number of families reporting 1 child, 2 children, 3 children, up to 15 children and over living at home. Comparing the 1931 results under this heading, it is interesting to note that the proportional number of families reporting 1 child and 2 children, together with the families reporting 10 children or more, show an increase, whilst the families reporting from 3 to 9 children show a decrease. In 1921, 13,394 families or 0.96 p.c. reported 10 or more children living at home while in 1931 the number had increased to 20,440 or to 1.22 p.c. It should be remembered in this connection that the decrease in the families of 3 to 9 children could cause an increase proportionately in those with 2 or less, so that the per cent increase in families having 1 and 2 children does not necessarily mean increased fertility in the recent marriages.

According to tenure, 1,370,622 families lived in their own homes, and 1,048,738 were tenants.

Of the total number of private families there were 1,857,105 families having both parents as head of family. Of that number 444,948 reported no children living at home, the remainder reported 4,299,330 children of all ages, an average of 3.04 children per family as against 3.06 in 1921. There were 1,433,488 children under 7 years of age, 1,540,451 from 7 to 14 years of age, and 1,325,391 children 15 years and over. According to literacy, 1,736,425 families reported both father and mother literate, 32,010 mother only illiterate, 49,636 father only illiterate, and 39,034 both father and mother illiterate. Both parents literate reported 2.10 p.c. of the children 7 to 14 years of age as illiterate and 95.25 p.c. at school. Where the mother only was literate 9.24 p.c. of the children 7 to 14 years of age were illiterate and 85.40 p.c. at school; where the father only was literate 9.24 p.c. of the children 7 to 14 years of age were illiterate and 88.69 p.c. at school; with both parents illiterate only 78.14 p.c. of the children 7 to 14 years of age were at school and the large number of 20.41 p.c. were illiterate. In 1921 the percentages of school attendance and literacy were 2.60 p.c., 92.70 p.c., 10.21 p.c., 80.52 p.c., 16.59 p.c., 76.96 p.c., 28.21 p.c., and 66.13 p.c. respectively, showing a pronounced improvement in 1931.

In the private families having both parents as heads there were 38,890 wives gainfully occupied and of that number 21,517 reported earnings aggregating \$11,426,350. There were also 517,573 children who were gainfully occupied, 447,339 of whom reported total earnings of

\$238,159,430. The total earnings of the male heads of families (wage-earners) having both parents as heads was \$1,218,094,500, and of other heads \$90,862,500 making a grand total of \$1,308,957,000 for all classes of heads.

**Age Distribution.**—The same causes which have rendered the sex distribution of population in Canada somewhat unusual in the past have also affected its age distribution. In the first stages of the settlement of a new colony, men in the prime of life constitute the bulk of the population, and women and children are conspicuous by their absence, so that there will be a disproportionately large male population between the ages of 20 and 50, together with a low birth rate. Later on, where there is land and food in abundance, and when the early disproportion of the sexes has been overcome, there is a very high rate of natural increase, and an extraordinarily large proportion of children among the population. Thus in 1871, 286.91 out of every 1,000 of the population of Canada were children under 10 years of age, and over half the total population (526.76 out of every 1,000) were under 20 years of age. But with growing urbanization, the average age at marriage increased and children came to be regarded as a liability rather than an asset. Thus in 1911, out of every 1,000 of the population, only 231.83 were under 10 years of age, and 423.42 under 20 years of age. In 1921, however, 239.67 per 1,000 of the population were under 10 years of age, and 434.81 per 1,000 under 20 years. In 1931, the number of children under 10 years of age had dropped to 212.70 per 1,000 of the population, and of persons under 20 to 416.39 per 1,000. In the age group 20-44 also there was a decline between 1921 and 1931. On the other hand, the number per 1,000 in the age group 45-69 went up from 169.38 to 189.52, and the number over 70 from 28.12 to 33.22 per 1,000.

**Racial Origins.**—The total increase in population over the decade 1921-31 was 1,588,837. The population of English origin increased by only 196,061 compared with 722,208 in the previous decade; that of Scottish origin by 172,725 compared with 175,745; and that of Irish origin by 123,005 compared with 57,419. The population of British origin, taken together, increased from 4,868,738 to 5,381,071, or by 512,333, between 1921 and 1931. This represented 32 p.c. of the total increase as compared with 61 p.c. of the total increase for the previous decade. At the same time the population of French origin increased from 2,452,743 in 1921 to 2,927,990 in 1931, or by 475,247 (slightly under 30 p.c. of the total increase for the decade) and showed the greatest absolute increase for any decade since 1871. Figures for the minor racial groups would indicate that the people of Scandinavian, German and Ukrainian origins increased between 1921 and 1931 by 36 p.c., 61 p.c., and 111 p.c., respectively. Owing to the new national and racial alignments in Central and Southeastern Europe following the Great War, comparison of the post-war numerical strength of certain stocks in Canada with pre-war returns cannot be made with certainty.

Relatively, the British group, which advanced from 54.07 p.c. to 55.40 p.c. of the whole in the decade 1911-21, declined to 51.87 p.c. in 1931. The French group on the other hand, which showed a gradual decline between 1871 and 1901 and a more pronounced one in 1911 and 1921, has improved its relative position considerably and in 1931 is once again the foremost single racial group. Together the British and French groups now constitute 80 p.c. of the total population, compared with 83 p.c. in 1921 and 1911, 88 p.c. in 1901, 89 p.c. in 1881 and no less than 92 p.c. in 1871.

The pronounced decline after 1901 in the combined proportion of the two major racial groups, *viz.*, British and French, with a corresponding increase in ethnic stocks of minor importance, has in the main been due to the immigration of continental Europeans to Canada during the past thirty years. Altogether, the percentage of the total population of European racial origin, other than British and French, increased from 8.53 p.c. of the total in 1901, to 12.82 p.c. in 1911, to 14.19 p.c. in 1921, and to 17.59 p.c. in 1931. Oriental immigration to Canada in the past thirty years has been responsible for the relative increase of the Chinese and Japanese racial groups from 0.41 p.c. in 1901 to 0.67 p.c. in 1931. In the same period the population of Negro origin has declined from 0.32 p.c. to 0.19 p.c. of the total, and that of Indian and Eskimo origin from 2.38 p.c. to 1.24 p.c.

**Birthplaces.**—In 1871, 97.29 p.c. of the population was born under the British flag, while sixty years later the percentage had declined to 89.18. The proportion of Canadian-born increased steadily until the opening of the century, but has declined as a result of the increase of

immigration after 1900. The 1931 Census shows declines in the proportions of British-born and United States-born as compared with 1921 but a substantial increase in the percentage of "other foreign-born," the proportion of Canadian-born remaining with little change. Worthy of note is the fairly steady increase of the United States-born population from 1.85 p.c. in 1871 to 4.25 p.c. in 1921, with a subsequent decline to 3.32 p.c. in 1931. Other foreign-born increased from 0.92 p.c. in 1871 to 6.23 p.c. in 1911, declined to 5.87 p.c. of the total population by 1921 but, as already noted, increased substantially to 7.50 p.c. by 1931.

In the Maritime Provinces, the population is shown by the census to be about 93 p.c. native-born, and in Quebec about 91 p.c. In Ontario, however, the proportion sinks to about 77 p.c., in Manitoba to about 66 p.c., in Saskatchewan to about 65 p.c., in Alberta to about 58 p.c., and in British Columbia to about 54 p.c. The general tendency over the past decade has been for the proportion of the native-born population to remain stationary or show a slight decrease in Eastern Canada, but in Western Canada increases are everywhere shown; thus, the percentages in 1921 were: Maritime Provinces 93, Quebec 92, Ontario 78, Manitoba 64, Saskatchewan 60, Alberta 54 and British Columbia about 50. About 44 p.c. of the total British-born population is in Ontario, but the greatest proportion of British-born population in any one province is in British Columbia, *viz.*, 27 p.c. which compares with 31 p.c. for 1921. The foreign-born element reaches its maximum percentage in the rapidly growing provinces of Saskatchewan and Alberta, where it constitutes about 24 p.c. and 27 p.c. of the respective populations as compared with 26 p.c. and 30 p.c. respectively for 1921.

**Citizenship.**—Of the total population of Canada (10,376,786), 9,712,221 were Canadian nationals, subdivided as follows: Canadian-born (including repatriated), 8,052,459; other British-born who have acquired domicile, 1,044,791; and naturalized foreign-born, 614,971. British subjects in Canada in addition to the above who had not acquired Canadian domicile numbered 135,426, so that the total number of British subjects in Canada was 9,847,647. The total number of aliens was 529,139, of whom 16,802 were Canadian-born (chiefly females by marriage to aliens); 4,613 were other British-born (again chiefly females married to aliens); and 507,724 were foreign-born.

**The Progress of Naturalization.**—The foreign-born residents of Canada numbered 1,122,695 in 1931 as compared with 890,277 in 1921, 752,732 in 1911 and 278,449 in 1901; among these the naturalized numbered 614,971 in 1931, 514,179 in 1921, 344,557 in 1911 and 153,908 in 1901, or 54.78 p.c., 57.75 p.c., 45.77 p.c. and 55.27 p.c. respectively. Alien residents in Canada showed an absolute decline between 1911 and 1921 of from 408,175 to 376,098, *i.e.*, from 5.66 p.c. of the population to 4.28 p.c. Between 1921 and 1931, they increased to 507,724, or 4.89 p.c. of the 1931 population. Among the foreign-born residents of Canada the United States-born exceed those born in any other country, although by continental groups the Europeans are more numerous. Between 1921 and 1931 the United States-born declined from 374,022 to 344,574, but there was a substantial net increase in the total foreign-born due to the large increase of Europeans. On the other hand, the percentage of the United States-born who are naturalized to total United States-born has increased from 63.63 in 1921 to 72.44 in 1931, whereas the percentage of Europeans who are naturalized has fallen from 57.88 in 1921 to 49.13 in 1931.

**Language.**—Classifying persons under five years of age as speaking the language of the home, of the total population, 6,999,913 spoke English, 1,779,338 spoke French, 1,322,370 spoke both English and French, and 275,165 could not speak either English or French.

Of the population over ten years of age in Canada in 1931, over 58 p.c. spoke English in the home, over 25 p.c. spoke French, over 3 p.c. spoke German, over 4 p.c. spoke one of the Slavic tongues, and nearly 2 p.c. spoke one or other of the Scandinavian tongues. Of 1,064,360 foreign-born, ten years of age and over, 88 p.c. could speak English. It is also interesting to observe the trends as between the use of the two official languages of the country, English and French. Of the population over ten years of age in Canada, 84.6 p.c. can speak English, the language of the majority, and 28.6 p.c. can speak French. As to the extent to which those of British and French origin respectively in Canada speak each other's language, it is interesting to note that of the 2,158,187 of French descent in Canada above ten years of age, 972,779 speak both English and French, 1,090,849 speak French alone, and 91,611 speak English alone. Among those of British

descent, 4,181,231 speak English alone, and only 175,409 speak English and French; there is in addition a group of 8,158 who speak French alone—mostly the descendants of early British settlers in Quebec.

**Religions.**—Throughout the sixty-year period since Confederation, something like two-fifths of the population of Canada has been of the Roman Catholic faith, the 1931 percentage, inclusive of Greek Catholics, being 41.30. Methodists were 16.27 p.c. of the population in 1871 but fell to 13.19 p.c. in 1921, while Presbyterians increased from 15.63 p.c. in 1871 to 16.04 p.c. in 1921, being reinforced by a considerable immigration from Scotland after the beginning of the century. The fusion of the Methodists and Congregationalists in 1925 with a large section of the Presbyterians, as the United Church of Canada, constituted that body the second largest religious body in the Dominion in 1931 with 19.44 p.c. of the population. The Presbyterians who did not adhere to the United Church of Canada numbered 8.39 p.c. of the population in 1931. The proportion of Anglicans in the population of Canada fell from 14.17 p.c. in 1871 to 12.69 p.c. in 1901 but thereafter the large immigration from the British Isles raised it to 16.02 p.c. in 1921, followed by a slight falling off to 15.76 p.c. in 1931. The Baptists have shown a fairly steady decline from 6.87 p.c. in 1871 to 4.27 p.c. in 1931.

The immigration movement during the first three decades of the twentieth century has led to a great growth of the religious bodies whose members come from the continent of Europe. Thus the Lutherans, who were only 1.09 p.c. of the population in 1871 and 1.72 p.c. in 1901, have risen to 3.80 p.c. in 1931. The Jews again, who were only 0.03 p.c. in 1871 and 0.31 p.c. in 1901, were 1.50 p.c. in 1931. The adherents of the Greek Orthodox Church were 0.99 p.c. in 1931. Of the total population in 1931 (10,376,786), 16,042 or 0.15 p.c. did not state their religion, while 54,164 or 0.52 p.c. belonging to small sects, were classed as "various," and 21,071 or 0.20 p.c. as of "no religion." Of the non-Christian sects, 155,614 or 1.50 p.c. were Jews, 24,087 or 0.23 p.c. were Confucians, 15,784 or 0.15 p.c. were Buddhists, and 5,008 or 0.05 p.c. were pagans.

**Literacy.**—Literacy in Canada has shown most encouraging progress since the opening of the twentieth century. In fact, considering that most present illiteracy is confined to the older ages, it may be asserted that it is rapidly becoming a thing of the past. In 1901, 14.38 p.c. of the population of five years of age and over could neither read nor write; the corresponding percentage for 1911 was 10.50; for 1921, 9.25; and for 1931 it was only 7.18. A truer test of progress is made by taking the statistics for the population of ten years of age and over; the percentage of illiterates in this significant section of the population was 3.79 p.c. in 1931, as compared with 5.10 p.c. in 1921. Illiteracy is definitely greater among males than among females. In 1931, 4.32 p.c. of the male population and 3.21 p.c. of the female population were recorded as unable to read or write, as compared with 5.73 p.c. and 4.43 p.c. respectively for 1921. Manitoba, Saskatchewan and Alberta, alone among the provinces, show a higher percentage of female illiteracy; this condition existed also in 1921, although the corresponding percentages for both males and females were then substantially greater. In general, New Brunswick is in the most unfavourable position for illiteracy (6.91 p.c.), though there has been an improvement since 1921. The province of Quebec, which in 1921 recorded the high percentage of 6.19 as illiterate, had reduced this proportion to 4.76 by 1931.

As education is so largely a municipal activity, it is of interest to note the literacy of persons (ten years of age and over) residing in cities with populations of 30,000 and over in 1931. Toronto had, in 1921 as in 1931, a very low percentage of illiteracy—1.68 p.c. in 1921 and 1.26 p.c. in 1931—and the larger cities of Ontario, generally, made a comparatively good showing in 1921. Other large cities of Canada had in 1921 fairly high percentages of illiteracy, the figures being: Montreal, 3.60 p.c.; Winnipeg, 3.54 p.c.; Vancouver, 3.54 p.c.; Quebec, 3.27 p.c.; Ottawa, 2.69 p.c.; and Hamilton, 2.12 p.c. Marked betterment during the decade is evident throughout the list of western cities, an improvement which has put Trois-Rivières, Quebec, Montreal and Halifax in a relatively less favourable position. While Trois-Rivières among the larger cities has still the highest percentage of persons who can neither read nor write, the proportion has been reduced from 7.03 p.c. in 1921 to 3.45 p.c. in 1931. The city of Saskatoon, Saskatchewan, had the lowest percentage of illiteracy in 1931, viz., 0.71, London, Ontario, being next with 0.88 p.c. In the cities of Windsor, Ontario, and Regina, Saskatchewan, both of which had low percentages of illiterates in 1921 (1.53 p.c. and 1.44 p.c. respectively), slight increases to 1.78 p.c. and 1.68 p.c., respectively, are shown in 1931.

**School Attendance.**—In 1931 the population of school age, 5-19 years, numbered 3,246,391 or 31.3 p.c. of the total population, as compared with 31.4 p.c. in 1921 and 30 p.c. in 1911. The proportion of the total group 5-19 years actually in attendance at school shows increase. In 1911 only 52.88 p.c. of the population of this age were in attendance at school; the proportion rose to 61.33 p.c. in 1921, and to 65.59 p.c. in 1931. The proportion of males between these ages attending school increased from 52.15 p.c. in 1911 to 60.80 p.c. in 1921 and 65.12 p.c. in 1931; that of females from 53.63 p.c. in 1911 to 61.86 p.c. in 1921 and 66.08 p.c. in 1931.

**Gainfully Occupied.**—There were 3,927,591 persons, ten years of age and over, gainfully occupied in Canada according to the 1931 Census, an increase of 23.78 p.c. over the number in 1921. The total population ten years of age and over increased 22.30 p.c. during the same period. The males represent the larger portion of the gainfully occupied, being 83.04 p.c. of the total, whereas only 16.96 p.c. of all gainfully occupied are females. In 1931 males gainfully occupied numbered 3,261,570 a 21.56 p.c. increase over the 1921 total, while the 666,021 females represented a 35.88 p.c. increase over the 1921 figure.

**Wage-Earners.**—The total number of wage-earners in 1931 was 2,570,097 as compared with 1,972,089 in 1921, an increase of 598,008 or 30.32 p.c. in the ten-year period. The number of male wage-earners in 1931 was 2,022,260 or 78.68 p.c. of the total for both sexes, while female wage-earners numbered 547,837 or 21.32 of the total. The percentage increase by sexes from 1921 to 1931 was 30.81 for males and 28.54 for females. In 1931 wage-earners as a class represented 24.80 p.c. of the total population and in 1921 22.47 p.c.

**Earnings in the Census Year.**—The total number of wage-earners in Canada reporting earnings for the census year ended June 1, 1931, was 2,476,414 or 96.35 p.c. of all wage-earners, and the total amount of their earnings was \$2,100,552,700. Of this number 1,947,957 were males and their earnings amounted to \$1,804,942,500 or 85.93 p.c. of the total earnings. Females reporting earnings numbered 528,457, and the total amount of their earnings was \$295,610,200 or 14.07 p.c. of total earnings. The total weeks worked by wage-earners reporting earnings was 104,624,422. The number of weeks worked by the males was 80,003,048 or 76.47 p.c. of the total for both sexes, and the total for the females was 24,621,374 weeks or 23.53 p.c. of the grand total.

**Wage-earners at Work and Not at Work on June 1, 1931.**—The number at work on June 1, 1931, was 2,100,139 or 81.71 p.c. of the total and the number not at work 469,958 or 18.29 p.c. of total wage-earners. Those not at work were classified by cause of absence from work. Wage-earners reporting "no job" as the reason for not being at work numbered 394,643 and represented 15.36 p.c. of all wage-earners. Persons having a job but not at work owing to "temporary lay-off" totalled 42,615 or 1.66 p.c. of the aggregate number of wage-earners in Canada. The number not at work on account of "strike or lockout" was 300. Those reporting such personal reasons as "illness" and "accident" were 25,684 and 4,465 respectively. Wage-earners reported "other causes" for not being at work in 2,251 cases.

When distinction of sex is made, it is at once observed that females not at work on June 1, 1931, are a much smaller percentage of the total female wage-earners than the males not at work are of the total male wage-earners. Out of 2,022,260 male wage-earners in Canada on the date of the Census, 1,600,184 or 79.13 p.c. of the total were at work and 422,076 or 20.87 p.c. were not at work. On the other hand, out of a total of 547,837 female wage-earners 499,955 or 91.26 p.c. were at work and only 47,882 or 8.74 p.c. were not at work. Thus the percentage not at work among male wage-earners was considerably more than twice as large as among female wage-earners.

**Employment and Unemployment in the Twelve Months Preceding the Census.**—The number of wage-earners losing some time during the period June 1, 1930, to June 1, 1931, was 1,027,479 or 39.98 p.c. of the total number in Canada. Among male wage-earners 889,743 or 44 p.c. of the total lost time while 137,736 or 25.14 p.c. of the female wage-earners reported

"time-loss." The aggregate number of weeks lost was 24,506,280, of which 21,607,109 weeks or 88.17 p.c. represented lost time among males, and 2,899,171 weeks or 11.83 p.c. "time-loss" among females.

Of the total number of weeks lost 19,674,606 weeks or 80.28 p.c. were due to "no job." "Temporary lay-off" accounted for 3,078,527 weeks or 12.56 p.c. of the total. Time lost owing to "strike or lockout" amounted to 11,536 weeks or 0.05 p.c. of total weeks. The number of weeks lost due to "illness" was 1,403,556 weeks or 5.73 p.c. of the total and for "accident" 227,462 weeks or 0.93 p.c. of the aggregate "time-loss." "Other causes" accounted for the remainder, 110,593 weeks, or 0.45 p.c. of total weeks lost.

**Rural and Urban Population.**—There has been a continuance in the drift citywards characteristic of population growth for several decades past in Canada (and indeed throughout the world) which occupies so large a place in present-day discussion, and on which a special monograph is under preparation in connection with the present Census. Defining "urban" as including all incorporated cities, towns, and villages (a definition that involves somewhat different limitations in different provinces) the urban communities of Canada absorbed somewhat over two-thirds of the total population increase of the past decade, with the result that the urban population of Canada in 1931 for the first time exceeded the rural by 767,330. Out of every 1,000 persons in the country on June 1, 1931, 537 were residing in communities organized as urban under the various provincial municipal acts, while 463 were resident in rural communities, as compared with 495 in urban and 505 in rural communities on June 1, 1921; 454 in urban and 546 in rural communities in 1911; 375 in urban and 625 in rural communities in 1901; and 318 in urban and 682 in rural in 1891. The showing is somewhat different if urban communities are defined for statistical purposes as communities of 1,000 inhabitants and over; on this showing 49.74 p.c. of the population was urban on June 1, 1931, and 50.26 p.c. rural, whereas in 1921, 45.26 p.c. was urban and 54.74 p.c. was rural.

Montreal and Toronto, the two largest cities of Canada, now number 818,577 and 631,207 inhabitants respectively. Two other cities, Vancouver and Winnipeg, have attained the 200,000 mark, and Hamilton, Quebec and Ottawa each have populations of over 100,000. The two western cities of Calgary and Edmonton are now in the 75,000 to 100,000 class. In this respect London, which excelled Edmonton in 1921, now takes the next lower place with a population of 71,148. Not only have cities of over 500,000 population (Montreal and Toronto) increased their proportions to the total (from 12.98 p.c. to 13.97 p.c.), but cities of from 100,000 to 500,000 have increased their aggregate population from 5.90 p.c. of the total to 8.46 p.c., and cities of between 5,000 and 100,000 from 17.68 p.c. to 19.29 p.c. in the decade 1921-31. The classes below 5,000 show slight proportional reductions. All the larger cities have in their neighbourhoods growing "satellite" towns or other densely settled areas in close economic relationship with the central municipality. This phenomenon is to-day of increasing importance largely as a result of the greater ease and speed of transportation by motor vehicle. It has therefore been considered advisable to calculate the total populations resident in what the United States census authorities call the "metropolitan areas" dependent upon each of the cities with 100,000 population or over. On this basis the total populations of the larger cities at the Census of 1931 were as follows: "Greater Montreal," 1,000,157; "Greater Toronto," 808,864; "Greater Vancouver," 308,340; "Greater Winnipeg," 280,202; "Greater Ottawa" (including Hull), 175,988; "Greater Quebec," 166,435; and "Greater Hamilton," 163,710.

Of the 10,362,833 people who form the population of the nine provinces of Canada, exclusive of the Territories, 3,289,507, or 31.7 p.c. live on farms. There are 728,623 farms within the nine provinces, of which 14,056 are located within the limits of incorporated cities, these so-called "urban" farms representing a population of 65,266. It must be noted that the decline in the proportions of "rural" population above noted has not involved a corresponding decline in the population actually on the farm; the rural decline has been almost entirely in occupations other than farming.

## §27. Summary of the Results of the Census of Agriculture, 1931

In five tables herewith, the main results of this census are given with the comparative figures of the Census of 1921. Briefly, while the value of farm property and of agricultural products show, as a result of low prices due to the depression, a falling off as compared with the figures of

the 1921 Census, there was an increase in the acreage devoted to crops and a consequent increase in production. There was an increase of 17,533 or 2.5 p.e. in the number of farms; an increase in occupied land of 22,226,131 acres or 15.8 p.e.; and an increase in improved land of 14,962,624 acres or 21.1 p.e. Similarly the acreage under field crops shows an increase of 8,244,565 acres, 6,196,439 acres of which are under wheat in the Prairie Provinces.

Of the main field crops, oats was the only one to show a decrease in acreage and production during the period. In live stock, horses showed a decline of 9.79 p.e., and cattle a smaller one (4.74 p.e.). Animal products showed increases ranging as follows: honey 176.8 p.e., eggs 66 p.e., milk 21 p.e., and wool 12.8 p.e.

The production of greenhouse and hothouse establishments and of vegetables generally showed such marked increase that, notwithstanding the decline in prices, there was an increase also in the total value of production amounting to 32.8 p.e. in 1930 over 1920. The quantities of orchard and small fruits and of maple syrup and sugar, however, were less in 1930 than in 1920. Fence posts and rails, among forest products, show increases, while there was a slight reduction in the production of firewood and a large decrease in the production of railway ties and pulpwood on farms.

It is of interest to note that the number of persons employed in agriculture has increased by 87,195 or 8 p.e. during the decade. The average acreage per farm increased from 198 acres in 1921 to 223.9 acres in 1931. The percentage of owned farms decreased from 86.5 p.e. of the total in 1921 to 80.5 p.e. in 1931, the number of rented and partly rented farms showing corresponding increases.

**Review by Provinces.**—Various types of farming, influenced by climate, soil and local conditions have developed in the different parts of Canada. In the Maritime Provinces, the comparatively small size of farms renders the production of cereal crops less economic, while the climate and high precipitation favour the production of potatoes, roots and fruits. In 1930, with only 11.8 p.e. of the total number of farms and 5.9 p.e. of the occupied acreage of Canada, the Maritimes produced 37.6 p.e. of the total yield of potatoes, and had over 20 p.e. of the total orchard area of the Dominion. In the provinces of Quebec and Ontario, climate and soil conditions favour a wide range of agricultural production. The prevailing types of farming are to a large extent governed by the proximity of industrial centres. Dairying and mixed farming prevail over the whole area, with vegetable growing prevalent in the neighbourhood of cities. A few sections, such as the Niagara peninsula and the area immediately north of Lake Erie, produce large quantities of fruits and tobacco. The Prairie Provinces with their shorter growing seasons, smaller rainfall and comparatively inexpensive lands have made possible the large-scale production of cereals, and outside of a few sections where a certain amount of mixed farming is carried on, grain growing is the main type of farming. British Columbia, like Ontario and Quebec, has a wide range of agricultural production; fruits and vegetables of high quality are produced, dairy farming is widespread and large areas are occupied by cattle and sheep ranches.

With regard more particularly to progress by provinces during the past ten years: in the Maritime Provinces there was an increase in the production of apples, potatoes, eggs and honey; the production of cereal crops generally decreased and that of milk remained stationary; a decrease is also noticed in the numbers of horses, cattle and sheep. In Quebec and Ontario the decade was characterized by an increase in the production of milk, eggs, honey and tobacco. Cereal crops have remained stationary in both provinces. In live stock, there were decreases in the numbers of horses and sheep in Quebec, and in the numbers of horses, cattle and swine in Ontario. In Ontario, although there was a decrease in the production of apples, the province still produces well over 75 p.e. of the peaches and pears grown in Canada. In the Prairie Provinces, the most important gain was in field crops, though there were considerable increases in the production of milk, honey, eggs and wool; in live stock there were decreases in the number of horses and cattle, but increases in the other classes. Increases in the numbers of live stock, except horses, and in animal products and fruits formed the main development in British Columbia.

**Trends 1871-1931.**—As illustrating the long-time trend, it is sufficient to state that in the last sixty years the number of occupied farms in Canada has almost doubled, while the acreage of occupied farm land has increased by some 350 p.e. and the improved acreage by over 390 p.e.

The expansion in farm areas was due principally to the opening up of the Prairie Provinces in the latter part of the last century; the number of farms in the Prairie Provinces has increased by over 420 p.c. between 1901 and 1931. Improved methods of agriculture and modern machinery have also contributed greatly to increase agricultural production. To typify: the production of wheat has increased 2,000 p.c.; of oats over 500 p.c.; of barley over 700 p.c.; while animal products, fruits and vegetables have had similar advances. From 1871 to 1931, the number of people employed in agriculture increased only 135.4 p.c., while the average size of farm increased from 98 acres in 1871 to 223.9 acres in 1931.

TABLE I.—NUMBER, TENURE, AREA AND VALUE OF FARMS, 1931 AND 1921

Item	Canada	Prince Edward Island	Nova Scotia	New Brunswick	Quebec
	No.	No.	No.	No.	No.
Number of farms.....	1931 728,023	12,865	39,444	34,025	135,967
	1921 711,060	13,701	47,432	36,555	137,619
Owners.....	1931 586,299	12,091	37,170	31,933	126,563
	1921 615,180	13,098	45,575	35,218	130,666
Tenants.....	1931 55,948	277	1,004	815	4,637
	1921 67,942	540	1,213	1,164	4,305
Part owner and part tenant.....	1931 30,962	328	853	630	2,416
	1921 30,962	328	853	630	2,416
Area occupied.....	1931 163,114,034	1,191,202	4,302,031	4,151,596	17,304,164
	1921 140,887,903	1,216,483	4,723,550	4,269,560	17,257,012
Average size of farms.....	1931 223.9	92.6	109.1	122.0	127.3
	1921 223.9	92.6	109.1	122.0	127.3
Area improved.....	1931 85,732,172	765,772	844,632	1,330,232	8,994,158
	1921 70,789,548	767,319	992,467	1,368,023	9,064,650
Area under crop.....	1931 57,025,483	494,092	574,729	958,189	6,079,793
	1921 49,080,918	458,644	646,848	897,375	5,964,154
Value of farm property.....	1931 5,247,755,468	58,332,029	105,877,410	103,530,618	877,273,510
	1921 6,554,809,509	58,977,962	136,841,573	127,567,575	1,085,234,333
Value of buildings.....	1931 1,342,924,300	19,080,500	43,860,500	38,080,500	257,017,800
	1921 1,381,917,200	17,289,156	51,172,700	45,157,500	284,313,358
Value of implements and machinery.....	1931 550,664,000	8,115,000	10,554,100	13,252,500	97,260,500
	1921 665,180,416	6,870,144	10,146,068	13,544,592	111,949,036
Value of live stock.....	1931 543,807,168	7,295,729	12,808,810	13,217,318	95,873,210
	1921 836,413,401	9,141,323	20,042,093	18,957,090	123,263,680

Item	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
	No.	No.	No.	No.	No.
Number of farms.....	1931 192,174	54,199	136,472	97,408	26,079
	1921 198,053	53,252	119,451	82,954	21,973
Owners.....	1931 157,427	37,073	90,691	71,060	21,385
	1921 168,726	43,650	92,668	66,629	18,958
Tenants.....	1931 21,514	9,857	21,044	11,808	2,853
	1921 20,199	6,053	12,942	8,072	2,049
Part owner and part tenant.....	1931 13,233	6,369	24,737	14,540	1,841
	1921 9,128	3,549	13,841	8,253	966
Area occupied.....	1931 22,840,808	15,131,085	55,673,460	38,977,457	3,541,541
	1921 22,628,901	14,615,844	44,022,907	29,293,053	2,860,593
Average size of farms.....	1931 118.9	279.2	407.9	400.1	135.8
	1921 114.3	274.5	368.5	353.1	130.2
Area improved.....	1931 13,272,966	8,521,900	33,548,988	17,748,518	704,966
	1921 13,169,359	8,067,823	25,037,401	11,768,042	544,464
Area under crop.....	1931 9,359,763	5,842,368	22,128,329	12,037,394	452,226
	1921 9,165,100	5,857,635	17,822,481	8,523,190	345,491
Value of farm property.....	1931 1,397,665,762	388,142,128	1,272,662,978	869,431,858	174,837,175
	1921 1,688,908,794	387,388,045	1,450,069,196	968,437,018	201,384,913
Value of buildings.....	1931 487,009,300	88,389,200	223,794,500	137,331,700	46,224,300
	1921 491,329,609	112,955,195	216,398,082	121,765,499	41,036,002
Value of implements and machinery.....	1931 151,928,200	54,847,200	185,510,500	116,300,600	12,885,500
	1921 169,953,547	67,847,699	176,675,721	98,814,513	9,379,096
Value of live stock.....	1931 172,890,362	44,635,428	98,008,978	81,706,858	17,370,475
	1921 235,006,271	75,729,340	196,485,201	137,330,605	20,458,198

## CENSUS OF CANADA, 1931

TABLE II.—ACREAGES OF THE MAIN FIELD CROPS, 1931 AND 1921

Item	Canada	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
Acreage under field crops.....	1931 57,925,483	494,692	574,729	958,189	6,079,793	9,350,763	5,842,368	22,126,320	12,037,394	452,226
Wheat.....	1921 40,680,918	458,644	646,848	897,375	5,964,154	9,165,100	5,857,635	17,822,481	8,523,190	345,491
Barley.....	1921 26,355,150	20,032	2,935	7,952	39,220	633,486	2,617,051	15,026,185	7,942,856	65,419
Oats.....	1921 20,276,070	26,528	12,555	12,641	101,564	692,172	2,819,428	11,684,292	4,885,933	40,627
Rye.....	1921 3,791,395	3,775	7,533	9,979	96,762	449,347	1,128,815	1,374,972	710,472	9,440
Hay cultivated.....	1921 2,171,954	4,056	6,160	4,625	105,130	412,438	325,242	419,893	300,609	5,785
Potatoes.....	1921 12,837,756	148,817	85,378	217,920	1,657,452	2,362,050	1,518,390	4,294,934	2,465,688	87,107
Roots.....	1921 14,228,252	162,625	102,788	212,274	1,629,621	2,850,940	1,792,917	4,860,202	2,546,167	70,718
Tobacco.....	1921 790,335	287	161	257	5,563	56,623	50,390	528,289	153,887	3,878
Other crops.....	1921 774,561	430	194	342	9,544	100,754	175,262	274,504	208,823	4,648
Fodder crops.....	1921 9,683,626	235,022	420,816	503,247	3,764,957	3,710,747	295,642	173,488	296,963	192,714
Potatoes.....	1921 8,796,494	212,133	468,265	552,467	3,646,415	3,439,112	63,235	33,676	217,549	163,648
Roots.....	1921 1,133,310	1,947	17,394	13,358	95,606	349,542	73,428	156,112	368,722	62,213
Tobacco.....	1921 633,855	1,131	4,655	2,288	67,272	400,183	93,102	134,374	204,510	31,340
Hay cultivated.....	1921 591,804	53,815	22,664	60,260	146,190	171,175	37,938	42,913	36,250	20,593
Other crops.....	1921 555,290	31,716	34,603	62,760	146,311	165,580	30,396	35,701	28,009	20,265
Roots.....	1921 185,705	8,268	8,775	9,380	25,762	112,226	2,428	1,143	13,651	4,123
Tobacco.....	1921 166,482	7,850	9,030	9,649	17,548	115,232	1,227	582	1,019	4,336
Other crops.....	1921 58,329	-	-	3	12,252	45,866	17	3	3	182
Other crops.....	1921 16,628	-	-	-	9,958	6,663	3	3	1	-

TABLE III.—ACREAGES AND PRODUCTION OF THE MAIN FIELD CROPS, 1930 AND 1920

Item	Unit	Canada	Prince Edward Island	Nova Scotia	New Brunswick	Quebec
Acreage under field crops.....	1930 Acre	57,950,965	487,422	574,021	944,811	5,906,939
Wheat.....	1920 " "	47,553,418	461,071	652,963	893,672	5,904,784
Barley.....	1920 " "	25,564,939	10,256	2,813	6,220	36,833
Oats.....	1920 " "	17,835,734	31,365	14,806	16,070	114,303
Rye.....	1920 " "	370,027,014	324,247	50,358	114,407	554,013
Hay cultivated.....	1920 " "	226,508,411	359,756	221,755	225,045	1,576,227
Potatoes.....	1920 " "	4,925,789	3,764	7,018	8,318	95,290
Roots.....	1920 " "	2,043,669	4,151	6,601	4,430	108,080
Tobacco.....	1920 " "	100,755,219	93,001	208,524	215,107	1,947,794
Other crops.....	1920 " "	42,966,049	80,004	152,048	97,644	2,320,781
Fodder crops.....	1920 " "	11,647,799	146,283	78,750	204,022	1,559,571
Potatoes.....	1920 " "	13,879,257	161,688	95,547	200,354	1,542,096
Roots.....	1920 " "	298,942,399	3,964,837	2,614,359	5,564,959	22,800,820
Tobacco.....	1920 " "	364,989,218	3,686,604	2,731,628	5,430,829	36,836,750
Other crops.....	1920 " "	1,147,511	256	146	228	5,241
Hay cultivated.....	1920 " "	484,708	357	220	266	0,238
Potatoes.....	1920 " "	14,759,079	7,184	3,724	5,121	78,753
Roots.....	1920 " "	6,215,515	4,616	4,579	4,759	124,065
Flax for seed.....	1920 " "	662,179	4	4	34	1,074
Other crops.....	1920 " "	1,164,752	65	3	11	1,539
Hay cultivated.....	1920 " "	4,252,124	25	29	610	14,445
Potatoes.....	1920 " "	4,898,286	578	53	74	16,074
Roots.....	1920 " "	9,657,187	231,755	427,765	601,850	3,806,351
Other crops.....	1920 " "	8,696,168	209,744	471,301	593,292	3,652,488
Fodder crops.....	1920 " "	10,768,118	216,310	518,228	548,462	3,843,777
Other fodder crops.....	1920 " "	8,847,613	211,541	603,191	580,742	3,251,428
Potatoes.....	1920 " "	1,843,132	2,693	10,312	15,981	107,543
Roots.....	1920 " "	1,487,198	1,038	11,085	4,307	68,808
Tobacco.....	1920 " "	6,158,372	6,873	62,736	43,475	508,365
Other crops.....	1920 " "	6,820,458	3,355	37,214	13,445	440,051
Potatoes.....	1920 " "	530,914	53,647	22,060	60,426	132,961
Roots.....	1920 " "	534,621	32,282	34,507	64,536	146,821
Tobacco.....	1920 " "	73,822,067	11,991,664	3,635,857	12,163,067	15,200,969
Other crops.....	1920 " "	62,230,052	4,832,384	4,389,515	8,410,963	17,745,957
Hay cultivated.....	1920 " "	180,205	8,450	8,178	8,557	22,020
Potatoes.....	1920 " "	179,458	8,480	10,141	9,607	18,027
Roots.....	1920 " "	63,268,204	4,457,418	3,536,701	3,742,038	7,593,533
Tobacco.....	1920 " "	64,740,756	2,920,125	3,237,481	2,650,687	5,164,286
Other crops.....	1920 " "	48,352	1	4	-	12,721
Hay cultivated.....	1920 " "	36,801	-	-	-	17,252
Potatoes.....	1920 " "	43,971,285	300	-	805	10,867,713
Roots.....	1920 " "	32,660,061	-	183	87	13,365,519

(1) Includes the production of prairie hay or natural grass for which no acreage is given.

TABLE III. (Con.)—ACREAGES AND PRODUCTION OF THE MAIN FIELD CROPS,  
1930 AND 1920

Item	Unit	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
Acreage under field crops.....	1930 Acre	9,170,555	5,921,099	22,514,354	11,914,702	427,092
	1920 "	9,088,739	5,435,526	16,781,150	8,018,438	317,053
Wheat.....	1930 "	632,320	2,150,371	14,713,673	7,943,014	59,739
	1920 "	850,525	2,507,113	10,188,713	4,079,481	33,555
	1930 Bush.	14,064,340	38,075,477	183,264,425	132,261,305	1,328,442
	1920 "	16,440,213	33,442,280	115,518,601	58,195,536	528,998
Barley.....	1930 Acre	480,157	1,783,951	1,835,799	698,051	7,441
	1920 "	403,005	749,317	399,023	364,686	4,310
	1930 Bush.	13,940,224	39,577,547	29,393,253	15,181,139	189,630
	1920 "	11,006,095	12,868,973	6,004,006	8,830,909	93,699
Oats.....	1930 Acre	2,290,914	1,340,563	3,793,224	2,163,384	71,188
	1920 "	2,760,839	1,669,518	4,676,426	2,720,149	52,638
	1930 Bush.	76,283,482	35,191,489	77,095,145	62,053,639	3,323,669
	1920 "	97,489,742	39,633,917	93,953,692	83,362,028	1,863,122
Rye.....	1930 Acre	48,331	85,697	814,629	190,583	2,400
	1920 "	104,338	125,982	117,851	124,502	1,858
	1930 Bush.	661,021	1,560,681	10,392,802	2,019,290	30,504
	1920 "	1,523,723	1,388,885	1,223,000	1,922,487	10,402
Flax for seed.....	1930 Acre	4,218	65,238	525,938	34,957	112
	1920 "	7,733	130,283	916,577	108,320	215
	1930 Bush.	47,021	713,219	3,283,496	191,819	1,519
	1920 "	91,170	942,973	3,457,473	488,862	1,027
Hay cultivated.....	1930 Acre	3,638,118	275,143	202,175	288,070	185,960
	1920 "	3,340,512	64,367	29,371	218,083	157,008
	1930 Tons	4,622,418	285,031	166,840	288,315	278,737
	1920 "	3,667,771	57,066	28,008	208,512	238,454
Other fodder crops <sup>(1)</sup> .....	1930 Acre	358,789	144,620	577,084	543,369	73,761
	1920 "	417,018	156,450	411,365	374,673	41,488
	1930 Tons	2,079,666	866,194	1,406,007	1,028,668	160,300
	1920 "	3,070,956	756,121	1,206,201	1,172,377	120,738
Potatoes.....	1930 Acre	141,983	83,371	39,662	29,971	10,824
	1920 "	156,082	26,841	31,453	23,917	18,172
	1930 Bush.	14,836,523	5,032,676	4,296,094	3,963,247	2,698,970
	1920 "	16,494,649	2,029,370	3,238,825	2,676,315	2,412,074
Roots.....	1930 Acre	111,635	1,767	971	14,578	3,743
	1920 "	126,045	1,464	679	807	4,205
	1930 Bush.	37,611,501	412,822	192,523	4,387,309	1,334,368
	1920 "	48,947,998	272,259	158,724	137,285	1,271,940
Tobacco.....	1930 Acre	35,487	7	3	2	131
	1920 "	19,621	2	2	1	9
	1930 Lbs.	33,022,707	8,255	1,890	1,803	67,812
	1920 "	19,279,240	922	80	540	13,484

TABLE IV.—LIVE STOCK AND ANIMAL PRODUCTS ON FARMS BY PROVINCES, 1930-31 AND 1920-21

Item	Canada	Prince Edward Island	New Scotland	New Brunswick	Quebec
<i>Live Stock</i>					
Horses (No.).....	1931 3,113,909	29,956	43,074	51,157	301,419
	1921 3,451,752	32,020	54,439	82,448	332,533
Cattle (No.).....	1931 7,973,031	100,487	221,001	213,450	1,707,449
	1921 8,369,489	109,948	266,369	230,312	1,594,710
Cows in milk or in calf (No.).....	1931 3,523,001	44,580	108,145	100,481	850,637
	1921 3,228,633	48,114	119,739	106,486	800,702
Sheep (No.).....	1931 3,627,116	78,479	106,344	143,677	733,684
	1921 3,200,467	105,884	271,742	187,524	856,169
Swine (No.).....	1931 4,699,831	40,589	43,865	85,012	799,210
	1921 3,324,291	39,172	47,457	75,805	690,857
Poultry (No.).....	1931 65,184,689	926,119	1,280,115	1,342,313	8,170,232
	1921 43,347,194	833,609	994,134	1,023,254	5,481,918
<i>Animal Products</i>					
Milk produced (lb.).....	1930 12,827,258,659	150,400,592	421,136,357	393,270,304	3,470,772,890
	1920 10,603,049,751	147,321,479	440,745,311	384,838,225	2,964,765,591
Eggs produced (doz.).....	1930 199,479,598	3,008,037	5,809,231	5,225,482	27,834,166
	1920 120,155,240	3,616,625	4,650,006	3,695,771	19,116,989
Honey produced (lb.).....	1930 13,666,534	8,224	34,693	48,787	3,259,796
	1920 4,837,053	2,353	10,362	26,211	1,559,885
Wool produced (lb.).....	1930 12,794,634	257,188	532,610	434,739	2,388,316
	1920 11,338,268	332,397	734,871	574,299	2,614,609

TABLE IV. (Con.)—LIVE STOCK AND ANIMAL PRODUCTS ON FARMS BY PROVINCES, 1930-31 AND 1920-21

Item	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
<i>Live Stock</i>					
Horses (No.).....1931	577,322	324,659	997,426	731,739	57,157
1921	669,048	355,747	1,077,882	806,244	61,385
Cattle (No.).....1931	2,514,344	668,878	1,188,884	1,124,615	233,923
1921	2,833,562	645,925	1,295,910	1,383,552	206,207
Cows in milk or in calf (No.).....1931	1,117,877	279,508	480,286	438,954	102,536
1921	1,065,049	235,699	414,581	381,854	96,435
Sheep (No.).....1931	1,044,624	216,790	231,915	785,929	146,577
1921	978,892	112,788	194,660	431,454	81,344
Swine (No.).....1931	1,359,176	390,043	949,055	1,052,128	51,758
1921	1,386,081	200,167	419,709	423,258	41,685
Poultry (No.).....1931	23,746,395	5,566,793	11,518,707	8,262,330	4,371,685
1921	16,503,697	3,461,325	7,857,828	5,176,302	2,015,127
<i>Animal Products</i>					
Milk produced (lb.).....1930	4,767,726,779	865,766,226	1,314,441,912	1,076,978,814	360,764,785
1920	4,200,424,122	574,799,362	929,102,084	752,712,153	208,346,024
Eggs produced (dos.).....1930	71,908,531	14,517,106	30,456,775	21,675,261	18,165,006
1920	45,059,808	8,493,144	18,328,201	11,032,417	5,262,279
Honey produced (lb.).....1930	7,925,824	1,475,225	284,539	284,036	345,411
1920	3,146,198	66,047	4,523	7,274	105,200
Wool produced (lb.).....1930	4,020,142	717,497	965,712	2,968,462	509,968
1920	3,864,606	490,347	743,837	1,756,341	226,961

TABLE V.—VALUE OF FARM PRODUCTS, 1930 AND 1920

Item	Canada	Prince Edward Island	Nova Scotia	New Brunswick	Quebec
	\$	\$	\$	\$	\$
Field crops.....1930	496,767,333	10,741,326	13,031,376	15,251,523	78,037,838
1920	933,045,636	10,448,967	21,834,118	24,638,016	132,600,099
Vegetables.....1930	33,863,076	163,698	1,287,848	952,336	7,098,919
1920	26,684,574	105,284	1,052,852	779,278	6,729,205
Greenhouse and hothouse products.....1930	6,929,760	23,511	163,330	197,645	1,003,185
1920	4,026,427	13,123	79,224	18,350	659,012
Orchard fruits.....1930	13,875,134	92,301	3,263,391	269,637	1,137,186
1920	19,146,681	168,212	3,985,757	397,799	1,406,960
Grapes and small fruits.....1930	4,980,714	14,928	171,458	146,106	525,830
1920	7,807,720	21,350	169,103	178,757	321,202
Maple syrup and sugar.....1930	3,067,695	10	18,815	37,961	2,006,227
1920	4,394,837	30	28,183	42,989	3,108,882
Forest products on farms.....1930	43,592,442	521,755	3,898,141	3,498,112	17,155,185
1920	67,668,313	713,884	4,502,445	6,717,903	30,765,739
Stock sold alive.....1930	106,941,204	1,235,273	1,552,097	1,250,265	13,061,033
1920	147,054,314	1,594,618	2,646,093	1,942,434	17,695,146
Stock slaughtered.....1930	45,541,183	873,715	1,740,587	2,049,091	12,628,077
1920	67,072,056	1,668,781	3,262,798	3,162,017	19,555,798
Animal products.....1930	223,806,355	2,780,856	8,372,860	7,271,084	55,742,757
1920	302,714,638	4,918,991	14,022,434	10,430,335	81,696,975

Item	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
	\$	\$	\$	\$	\$
Field crops.....1930	145,048,085	43,775,097	105,532,466	74,203,359	11,146,263
1920	234,776,411	104,488,969	249,312,552	142,258,290	12,668,923
Vegetables.....1930	13,505,917	2,059,747	2,815,905	2,554,092	2,832,574
1920	10,127,815	1,696,927	2,455,849	1,859,168	1,828,196
Greenhouse and hothouse products.....1930	3,783,764	170,576	86,717	285,183	1,215,849
1920	2,518,941	106,264	84,536	196,310	350,687
Orchard fruits.....1930	5,924,571	7,176	2,152	3,111	3,175,909
1920	9,576,877	5,239	1,033	1,090	3,605,714
Grapes and small fruits.....1930	2,776,651	17,491	20,569	22,837	1,184,818
1920	5,849,564	6,210	6,276	6,089	1,240,169
Maple syrup and sugar.....1930	1,004,615	67	-	-	-
1920	1,214,749	-	-	-	-
Forest products on farms.....1930	12,762,589	1,264,695	1,589,352	1,791,902	1,090,711
1920	18,336,015	1,813,087	1,851,935	1,508,378	1,488,327
Stock sold alive.....1930	52,563,705	6,906,790	10,886,130	16,443,325	3,042,586
1920	79,074,656	9,234,110	14,781,814	17,094,061	2,901,472
Stock slaughtered.....1930	12,146,865	3,170,631	7,215,891	4,382,144	1,333,372
1920	19,768,561	4,502,714	8,752,989	4,761,902	1,738,496
Animal products.....1930	85,830,312	13,067,154	20,094,839	17,101,138	12,942,348
1920	121,687,905	15,011,476	24,694,243	19,860,240	10,302,059

## §28. Summary of the Results of the Census of Merchandising and Service Establishments, 1931

The 1931 Census of Merchandising and Service Establishments, being the first complete census of its kind, does not illustrate trends in the field of distribution during the past decade but measures the present structure of retail and wholesale trade in Canada. For numbers of persons engaged and numbers of establishments operated, retail merchandising is disclosed as the most important field of internal commerce. There were 125,003 retail merchandise establishments in Canada in 1930, with sales amounting to \$2,755,569,900. They engaged 166,001 full-time male and 72,682 full-time female employees who were paid \$247,370,500 during the year, and in addition 23,526 males and 13,250 females on a part-time basis, at wages aggregating \$10,485,100. Apart from hired employees, there were 125,169 proprietors or firm members actively engaged in retail stores. The value of the capital invested in retail merchandise establishments amounted to \$1,239,483,800, of which \$483,627,500 was the value of stocks on hand at the end of the year. Retail stores in cities of 30,000 population or over accounted for 54.68 p.c. of the sales, although the population of such localities forms only 29.15 p.c. of the Dominion total. When the stores are grouped by amount of business, it is found that stores with sales of less than \$10,000 per annum account for only 9.51 p.c. of the total sales, although they form 56.59 of the total number of establishments. On the other hand, it is found that 2.68 p.c. of all stores (those having sales of \$100,000 or over) did 39.35 p.c. of the business. If the stores are classified by type of operation, the results of the Census show that 79.57 p.c. of the total retail merchandise trade was handled by independent stores and 20.43 p.c. by chain stores.

When the trade of retail stores is analyzed by kind of business, the sales of stores in the food group, which contains grocery and meat stores, constitute 22.33 p.c. of the total, while the general merchandise group, which embraces department and variety stores, accounts for 16.39 p.c. of the total sales. The automotive group, with 13.86 p.c., is third in importance.

The service and amusement field of trade had 42,223 establishments with receipts of \$249,455,900. Full-time salaries for 41,875 male and 13,382 female employees amounted to \$58,217,700, while 7,880 part-time male and 1,104 part-time female employees received \$3,014,200. The business of these establishments is largely confined to urban centres, as 71.24 p.c. of the receipts were reported by establishments in places of 30,000 population or over. Among the leading kinds of business in this field were motion picture houses and theatres, cleaning and dyeing establishments, laundries, barber shops and beauty parlors, automotive and other repair shops, cobbler shops, taxi, and motor transportation businesses.

The Census of Hotels showed there were 4,176 hotels in operation the entire year doing a business of \$83,732,700 with 107,674 guest rooms, 26,833 employees and payrolls amounting to \$18,821,514. There were also 782 hotels in operation part of the year, chiefly at tourist and pleasure resorts. These hotels reported receipts of \$6,786,270. Their employees numbered 8,113 and their payrolls amounted to \$1,579,149.

For the purposes of the census the wholesale field was divided into two major sections according to the nature of the functions performed by reporting establishments. The first section consists of "wholesale proper" i.e., concerns carrying on a regular wholesale business, the most common type being the wholesale merchant, although importers and exporters are numerous in some lines of trade. The other section consists of the more specialized types of wholesalers, such as bulk tank stations, co-operative marketing associations, and the establishments engaged chiefly in soliciting orders, such as brokers, manufacturers' and other agents and manufacturers' sales branches. The total value of sales or orders reported by all wholesale establishments was \$3,325,210,300, of which \$1,111,319,200 were reported by "wholesalers proper" and \$2,213,891,100 by "other wholesale establishments." There were 90,564 employees in wholesale establishments of all kinds and their salaries amounted to \$146,346,600 in the year. Approximately 70 p.c. of the total wholesale trade, and almost 60 p.c. of the sales of "wholesalers proper" are transacted by establishments located in four cities. Of the sales of all wholesale establishments, Montreal has 23.06 p.c.; Toronto, 20.80 p.c.; Winnipeg, 19.12 p.c.; and Vancouver, 6.35 p.c. Of the sales of "wholesalers proper" the percentages are: Montreal, 25.84 p.c.; Toronto, 20.46 p.c.; Winnipeg, 6.56 p.c.; and Vancouver, 7.05 p.c.

## §29. Summary of the Results of the Census of Institutions, 1931

The number of social institutions by type in the several provinces is shown in the first of the accompanying tables, while the second gives the main totals for Canada as to numbers of inmates and as to receipts and expenditures. Hospitals for the sick numbered 806; mental institutions 58; charitable and benevolent institutions 456; and penal and corrective institutions 42. The available records for common gaols are collected and published annually by the Bureau in the Annual Report on Criminal Statistics.

NUMBER OF INSTITUTIONS—CLASSIFIED AS TO PROVINCE AND TYPE, AS AT  
JUNE 1, 1931

Institutions	Canada	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Mani- toba	Saskat- chewan	Alberta	British Col- umbia	Yukon and N.W.T.
<i>(a) Hospitals—</i>											
General Public.....	445	3	22	16	51	114	28	61	76	67	7
General Private.....	92	—	2	5	12	31	2	17	14	9	—
Women's (only).....	19	—	2	1	3	6	1	2	3	1	—
Private Maternity.....	60	—	—	—	6	6	—	15	26	7	—
Paediatric.....	9	—	1	—	4	2	1	—	—	—	—
Orthopaedic.....	6	—	—	—	1	1	1	—	1	2	—
Red Cross.....	43	—	—	1	—	23	5	12	—	2	—
Convalescent.....	18	—	—	—	5	4	1	—	1	7	—
Isolation.....	13	—	1	—	3	4	2	—	3	—	—
Tuberculosis.....	31	1	3	2	7	12	1	3	1	1	—
Incurable.....	22	—	—	1	6	7	1	2	4	1	—
Others.....	12	—	—	—	6	5	—	—	1	—	—
<i>Domestic—</i>											
Pensions.....	8	—	1	1	1	2	1	—	1	1	—
Military.....	10	—	1	—	2	5	1	—	—	1	—
Quarantine and Immigration.....	7	—	2	2	2	—	—	—	—	1	—
Marine.....	2	—	2	—	—	—	—	—	—	—	—
Indian Affairs.....	7	—	—	—	—	1	1	1	4	—	—
Leper.....	2	—	—	1	—	—	—	—	—	1	—
<b>Totals, Hospitals.....</b>	<b>806</b>	<b>4</b>	<b>37</b>	<b>30</b>	<b>109</b>	<b>223</b>	<b>46</b>	<b>114</b>	<b>135</b>	<b>101</b>	<b>7</b>
<i>(b) Mental Institutions.....</i>	<b>58</b>	<b>1</b>	<b>18</b>	<b>1</b>	<b>9</b>	<b>10</b>	<b>4</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>—</b>
<i>(c) Charitable Institu- tions—</i>											
Homes for Adults.....	118	1	9	8	28	63	4	—	—	5	—
Homes for Adults and Children.....	79	—	6	9	44	13	3	—	1	3	—
Orphanages.....	119	2	10	7	41	29	13	5	3	9	—
Day Nurseries.....	20	—	1	1	7	8	2	—	—	1	—
Child Placing Agencies and Children's Aid Societies.....	90	2	13	4	1	56	4	3	4	3	—
Juvenile Immigration Societies.....	19	—	2	1	2	9	1	2	1	1	—
Schools for Deaf, Dumb and Blind.....	11	—	2	—	5	2	1	—	—	1	—
<b>Total Charitable Institutions.....</b>	<b>456</b>	<b>5</b>	<b>43</b>	<b>30</b>	<b>128</b>	<b>180</b>	<b>28</b>	<b>10</b>	<b>9</b>	<b>23</b>	<b>—</b>
<i>(d) Penal and Corrective Institutions—</i>											
Penitentiaries.....	7	—	—	1	1	2	1	1	—	1	—
Corrective and Reform- ative.....	35	—	4	3	5	13	3	1	2	4	—
<b>Total Penal and Corrective In- stitutions.....</b>	<b>42</b>	<b>—</b>	<b>4</b>	<b>4</b>	<b>6</b>	<b>15</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>5</b>	<b>—</b>
<b>Totals, Institutions.....</b>	<b>1,362</b>	<b>10</b>	<b>102</b>	<b>65</b>	<b>252</b>	<b>434</b>	<b>82</b>	<b>128</b>	<b>149</b>	<b>133</b>	<b>7</b>

## CENSUS OF INSTITUTIONS, 1931

## (a) HOSPITALS

## MOVEMENT OF POPULATION

Number of hospitals reporting	Admissions	Live Births	Under treatment during year			Collective days' stay		
			Adults	Infants	Total	Adults	Infants	Total
(1) 787	592,591	68,306	630,228	68,806	698,534	12,554,680	930,203	13,484,883

## FINANCIAL

Receipts		Expenditures		Assets (2)	(1) Nineteen hospitals in operation on June 1, 1931, with total capacities of 346 beds were unable to furnish reports. (2) For 599 hospitals only.
Paying Patients	Total	Maintenance	Total	Land, Buildings, Furniture, etc.	
\$	\$	\$	\$	\$	
16,487,979	45,171,434	35,821,498	44,647,850	121,021,132	

## (b) MENTAL INSTITUTIONS

## MOVEMENT OF POPULATION

Number of Institutions reporting	Patients on Jan. 1, 1930	Direct admissions during 1930	Patients treated during 1930	Average daily population	Collective days' stay	Note.—56 of the 58 Mental Institutions forwarded complete reports
56	28,754	9,321	38,075	31,240	11,401,040	

## FINANCIAL

Receipts				Expenditures		Cost per patient day	
Grants and Payments	Fees	Other Receipts	Total	Maintenance	Total	For maintenance	Total
\$	\$	\$	\$	\$	\$	\$	\$
10,904,081	1,774,945	712,955	13,452,481	10,342,757	13,306,026	0.96	1.17

## (c) CHARITABLE AND BENEVOLENT INSTITUTIONS

Item	Number of Institutions	Number in care on June 1, 1931			Financial—1930	
		Adults	Children	Total	Receipts	Expenditures
Homes for Adults.....	118	8,122	—	8,122	\$ 2,279,519	\$ 2,358,222
Homes for Adults and Children.....	79	3,628	5,330	8,958	1,808,348	1,835,014
Orphanages.....	119	—	11,179	11,179	2,417,970	2,530,450
Day Nurseries.....	20	—	2,513	2,513	—	—
Child Placing Agencies and Children's Aid Societies.....	90	—	14,607	14,607	1,266,464	1,148,458
Juvenile Immigration Societies.....	19	—	6,466	6,466	260,000	268,686
Schools for Blind, Deaf and Dumb.....	11	—	1,687	1,687	1,364,400	1,357,419
Totals.....	456	11,750	41,782	53,532	9,396,701	9,498,249

## (d) PENAL AND CORRECTIVE INSTITUTIONS

## MOVEMENT OF POPULATION

Item	Number of Institutions	Inmates on June 1, 1930			Inmates released during 1930			Total		
		Adults	Juveniles	Total	Adults	Juveniles	Total	Adults	Juveniles	Total
(1) Penitentiaries.....	7	3,653	95	3,748	1,136	—	1,136	4,789	95	4,884
(2) Reformatives and Corrective Institutions.....	35	2,390	2,853	4,743	9,328	1,953	11,281	11,718	4,306	16,024
Totals.....	42	6,043	2,448	8,491	10,464	1,953	12,417	16,507	4,401	20,908

## FINANCIAL

Item	Total Receipts	Expenditures			Assets
		Maintenance	Non-maintenance	Total	Land, Buildings, etc.
(1) Penitentiaries.....	\$ 2,849,079	\$ 1,926,457	\$ 922,622	\$ 2,849,079	\$ 10,034,098
(2) Reformatives and Corrective Institutions.....	3,746,471	2,409,432	1,204,778	3,704,210	11,579,664
Totals.....	6,595,550	4,425,889	2,127,400	6,553,289	21,613,762

### §30. Representation in the House of Commons of Canada, 1867-1931<sup>(1)</sup>

It has been pointed out that the legal *raison d'être* of the Census of Canada is to enable a redistribution measure to be passed through Parliament. The effect, therefore, of the population changes shown by the Census of 1931 upon representation in the House of Commons may be given the following explanatory and historical resumé.

**Constitutional.**—Under Section 37 of the British North America Act, 1867 (30 Vict., c. 3), it was provided that "The House of Commons shall . . . consist of One hundred and eighty-one Members, of whom Eighty-two shall be elected for Ontario, Sixty-five for Quebec, Nineteen for Nova Scotia, and Fifteen for New Brunswick." Further, under Section 51, it was enacted that after the completion of the Census of 1871 and of each subsequent decennial Census, the representation of the four provinces should be readjusted by such authority, in such manner, and from such time as the Parliament of Canada provided, subject and according to the following rules:—

- (1) Quebec shall have the fixed Number of Sixty-five Members:<sup>(2)</sup>
- (2) There shall be assigned to each of the other Provinces such a Number of Members as will bear the same Proportion to the Number of its Population (ascertained at such Census) as the Number Sixty-five bears to the Number of the Population of Quebec (so ascertained):
- (3) In the Computation of the Number of Members for a Province a fractional Part not exceeding One Half of the whole Number requisite for entitling the Province to a Member shall be disregarded; but a fractional Part exceeding One Half of that Number shall be equivalent to the whole Number:<sup>(3)</sup>
- (4) On any such Re-adjustment the Number of Members for a Province shall not be reduced unless the Proportion which the Number of the Population of the Province bore to the Number of the aggregate Population of Canada at the then last preceding Re-adjustment of the Number of Members for the Province is ascertained at the then latest Census to be diminished by One Twentieth Part or upwards:
- (5) Such Re-adjustment shall not take effect until the Termination of the then existing Parliament.

Again, in Section 52 of the British North America Act, it was enacted that "the Number of Members of the House of Commons may be from Time to Time increased by the Parliament of Canada, provided the proportionate Representation of the Provinces prescribed by this Act is not thereby disturbed."

Later on, by the British North America Amendment Act of 1886 (49-50 Vict., c. 35), provision was made in Section 1 that "the Parliament of Canada may from time to time make provision for the representation in the Senate and the House of Commons of Canada, or in either of them, of any territories which for the time being form part of the Dominion of Canada, but are not included in any province thereof." Under this section the Yukon Territory was given one representative by Chapter 37 of the Statutes of 1902.

Again in 1915 an Amendment to the British North America Act (5-6 Geo. V, c. 45), was passed by the Imperial Parliament, providing that "notwithstanding anything in this Act, a province shall always be entitled to a number of members in the House of Commons not less than the number of senators representing such province."

<sup>(1)</sup> As representation in the Senate is not directly related to the census it is not dealt with in this survey. The growing importance of Western Canada was, however, recognized in 1915 by its erection into a fourth representation area with a representation of 24 members equal to that of each of the three original areas, Ontario, Quebec and the Maritime Provinces. For details of the changes of representation of the various provinces in the Senate since Confederation, see the Canada Year Book for 1933, pages 76 to 78.

<sup>(2)</sup> Note, however, that (under the Quebec Boundaries Act, 1912, c. 45) the definition of the area of Quebec for the purposes of this rule does not include the territory added to that province by the Quebec Boundaries Extension Act, 1912.

<sup>(3)</sup> This obviates the statistical problem which has given rise to much discussion in the United States, viz., the problem of the best method of fractional representation.

**The 1931 Redistribution Problem.**—The population of Quebec, it has been shown, constitutes the basis from which the unit of representation in the other provinces is fixed, Quebec's representation of sixty-five members in the House of Commons remaining constant. The provisions of the Quebec Boundaries Extension Act, 1912 (Geo. V, c. 45), however, while they provided for an enlargement of the area of the province, stipulated that the population of the newly added areas should not be included in arriving at the unit of representation. Quebec's population in 1931 (excluding the population (2,177) of the territory added to Quebec by the Boundaries Extension Act of 1912) was 2,872,078, which, divided by 65, gives a unit of representation of 44,186. The quotient obtained by dividing the population of each province as shown at the date of the census, by the unit (44,186) indicates (except where Subsection 4 of Section 51 of the British North America Act and the Amending Act of 1915 apply), the number of members to which each province is entitled. These numbers as determined by the Census of 1931 and the two preceding censuses are shown in the accompanying table.

REPRESENTATION OF THE PROVINCES AND TERRITORIES OF CANADA IN THE HOUSE OF COMMONS, AS DETERMINED BY THE CENSUSES OF 1911, 1921 AND 1931

Province	Census 1911			Census 1921			Census 1931		
	Population	Quotient based on Unit (30,819)	Representation	Population	Quotient based on Unit (36,283)	Representation	Population	Quotient based on Unit (44,186)	Representation
Prince Edward Island.....	93,728	3-04	4	88,615	2-44	4	88,038	1-99	4
Nova Scotia.....	492,338	15-98	16	523,837	14-44	14	512,846	11-61	12
New Brunswick.....	351,889	11-42	11	387,876	10-69	11	408,219	9-24	10
Ontario.....	2,327,292	82-00	82	2,833,662	80-86	82	3,431,683	77-66	82
Manitoba.....	461,394	14-97	15	610,118	16-82	17	700,139	15-85	17
Saskatchewan.....	422,432	15-68	16	757,519	20-89	21	921,785	20-89	21
Alberta.....	374,206	12-41	12	588,454	16-23	16	731,606	16-56	17
British Columbia.....	392,480	12-74	13	524,582	14-40	14	694,263	15-71	16
Quebec (without New Quebec).....	2,003,232	65-00	65	2,358,412	65-00	65	2,872,078	65-00	65
Totals.....	7,189,080	—	234	8,773,066	—	244	10,380,656	—	244
Quebec (New Quebec).....	12,544	—	—	12,787	—	—	12,177	—	—
Yukon.....	8,512	—	1	4,157	—	1	4,230	—	1
Northwest Territories.....	6,507	—	—	7,988	—	—	9,723	—	—
Canada.....	7,206,643	—	235	8,788,483	—	245	10,376,788	—	245

<sup>1</sup>Represents the population in the area added to Quebec by the Quebec Boundaries Extension Act, 1912, the population of which by Sec. 2, ss. "A" of said Act, is to be excluded from the population of the province in ascertaining the unit of representation.

<sup>2</sup>Including Royal Canadian Navy (485) not otherwise allocated in 1921.

The application of the provision of Subsection 4 of Section 51 of the British North America Act (quoted above) to Prince Edward Island, Nova Scotia, New Brunswick, Ontario, Manitoba (the provinces in which a decrease in the rate of growth of population as compared with the rate of Canada as a whole, has taken place), is shown in the following statement:—

Province	Proportion which population of each province bears to the total population in Canada		Decrease in proportion from 1921-1931	Ratio of decrease in proportion from 1921 to 1931 to proportion in 1921	Decrease greater than, equal to or less than one-twentieth of proportion in 1931
	1921	1931			
Prince Edward Island.....	0.01008426	0.00948412	-0.0160014	1587	greater
Nova Scotia.....	0.05961197	0.04942243	-0.1018954	1709	greater
New Brunswick.....	0.0413965	0.0333963	-0.0480002	1087	greater
Ontario.....	0.33384637	0.33070769	-0.00313858	0094	less
Manitoba.....	0.06943053	0.06747166	-0.00195887	0282	less
Yukon.....	0.00047393	0.00040764	-0.00006539	1352	greater

The above table shows that no reduction should take place in the representation of Ontario or Manitoba, as the proportion which the number of the population of the province bore to the number of the aggregate population of Canada at the readjustment of the number of members for the province based on the Census of 1921 is ascertained at the Census of 1931 to be diminished by less than one-twentieth part.

*Nova Scotia.*—The proportion for Nova Scotia having diminished by more than one-twentieth part, the provisions of Subsection 4 of Section 51 do not apply and the representation of Nova Scotia should be reduced in accordance with the provisions of Section 51, Subsections 2 and 3 of the Act by 2 members.

*Prince Edward Island.*—Prince Edward Island would have only 2 members on a population basis alone, but its representation remains unchanged at 4 under the Act of 1915 referred to above.

*New Brunswick.*—The representation of New Brunswick if fixed by the unit of representation (44,186) alone, would be reduced from 11 to 9; but as the amendment to the Act of 1915 provided that "a province shall always be entitled to a number of members in the House of Commons, not less than the number of senators representing such province," the representation of New Brunswick will be 10 instead of 9, corresponding with the number of Senators from that Province.

*Yukon.*—The representation of the Yukon is not determined by the B.N.A. Act, but is within the competence of Parliament to decide.

The representation, therefore, to which each province is entitled as a result of redistribution based upon the 1931 Census is as follows:—

Prince Edward Island.....	4
Nova Scotia.....	12
New Brunswick.....	10
Quebec.....	65
Ontario.....	82
Manitoba.....	17
Saskatchewan.....	21
Alberta.....	17
British Columbia.....	16
Yukon.....	1
	<hr/>
	245

The above was confirmed by the Representation Act, 1933 (23 Geo. V, chap. 54).

**Historical Review of Redistribution.**—The changes that have been effected by the various Representation Acts in the membership of the House of Commons since Confederation are illustrated in the following table, which gives the representation of each province and territory after each Dominion general election—i.e., as at the commencement of each of the seventeen Parliaments from 1867 to 1930:—

REPRESENTATION IN THE HOUSE OF COMMONS BY PROVINCES AND TERRITORIES, AS AT THE COMMENCEMENT OF EACH PARLIAMENT FROM 1867 TO 1930

Province	1867	1872	1874	1879	1882	1887	1891	1896	1900	1904	1908	1911	1917	1921	*1925	Representation Act, 1933
Ontario.....	82	88	88	88	92	92	92	92	92	86	86	86	82	82	82	82
Quebec.....	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65	65
Nova Scotia.....	19	21	21	21	21	21	21	20	20	18	18	18	16	16	14	12
New Brunswick.....	15	16	16	16	16	16	16	14	14	13	13	13	11	11	11	10
Manitoba.....		4	4	4	5	5	5	7	7	10	10	10	15	15	17	17
British Columbia.....		6	6	6	6	6	6	6	6	7	7	7	13	13	14	16
Prince Edward Island.....			6	6	6	6	6	5	5	4	4	4	4	4	4	4
Saskatchewan.....											10	10	16	16	21	21
Alberta.....						4	4	4	4	10	7	7	12	12	16	17
Yukon.....										1	1	1	1	1	1	1
	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
	181	200	206	206	211	215	215	213	213	214	221	221	235	235	245	245

\*The representation at the general elections of 1926 and 1930 was the same as in 1925.

The following descriptive review may be added:—

As set out in the provisions of the B.N.A. Act that have been quoted, the first Dominion House of Commons of 1867 consisted at its commencement of 181 members, made up of 82 for Ontario, 65 for Quebec, 19 for Nova Scotia and 15 for New Brunswick. To this number were added under the Manitoba Act, 1870 (33 Vict., c. 3), 4 members to represent the newly-created province of Manitoba; also, according to the agreement under which British Columbia entered Confederation, ratified by Imperial Order in Council of May 16, 1871, 6 members were added to represent the new province, making a total of 191 members at the end of the First Parliament.

Arising out of the first census of the Dominion in 1871, a readjustment of representation took place in 1872 (c. 15, Statutes of 1872), increasing the representation of Ontario from 82 to 88, of Nova Scotia from 19 to 21 and of New Brunswick from 15 to 16 members, the 9 additional members bringing the total number of representatives up to 200. To these were added in 1874, as a result of the agreement under which Prince Edward Island entered Confederation (ratified by Imperial Order in Council of June 26, 1873), 6 members representing the new province, bringing the membership of the House of Commons to 206.

The result of the second census, that of 1881, necessitated the passage of a new Representation Act (45 Vict., c. 3), increasing the representation of Ontario from 88 to 92 and that of Manitoba from 4 to 5, thus bringing the membership of the House of Commons to 211 members. To these were added, under the provisions of 49 Vict., c. 24, passed in 1886, 4 members for the Northwest Territories (2 for the then provisional district of Assiniboia, and 1 each for the then provisional districts of Alberta and Saskatchewan), bringing the total membership to 215.

The third census in 1891, was followed by another readjustment of representation, reducing the representation of Nova Scotia from 21 to 20, of New Brunswick from 16 to 14, of Prince Edward Island from 6 to 5, and increasing the representation of Manitoba from 5 to 7, the representation of the other provinces remaining as before. The net result was a reduction of the members of the House from 215 to 213.

The fourth census, that of 1901, resulted in a readjustment in 1903, reducing the representatives of Ontario from 92 to 86, of Nova Scotia from 20 to 18, of New Brunswick from 14 to 13, and of Prince Edward Island from 5 to 4. On the other hand the representation of Manitoba was increased from 7 to 10, of British Columbia from 6 to 7, and of the Northwest Territories from 4 to 10—these provisions making no change in the total membership. By Chapter 37 of the Statutes of 1902, however, a member had been added for the Yukon Territory, so that the net effect of the changes was to place the membership at 214 in the early years of the present century. Thereafter the rapid growth of the Northwest Territories led to their division and admission to Confederation in 1905 as the provinces of Alberta and Saskatchewan. In the Acts admitting them—Alberta Act (4-5 Edw. VII, c. 3), and the Saskatchewan Act (4-5 Edw. VII, c. 42)—it was provided that their representation should be readjusted on the basis of the results of the Quinquennial Census of 1906. The Representation Act of 1907, implementing this pledge, increased the representation of Saskatchewan from 6 to 10, and of Alberta from 4 to 7 members, thus raising the total membership of the House of Commons to 221.

The Census of 1911, with its large but unevenly distributed increase of population led to very considerable changes in representation, enacted by the Representation Act of 1914. The representatives of Ontario were reduced in number from 86 to 82, of Nova Scotia from 18 to 16, of New Brunswick from 13 to 11, and of Prince Edward Island from 4 to 3. On the other hand the representation of Manitoba was raised from 10 to 15, of Saskatchewan from 10 to 16, of Alberta from 7 to 12, and of British Columbia from 7 to 13. The net result was an increase of 13 members in the total membership of the House of Commons, bringing the membership to 234. However, in the following session the amendment to the British North America Act, already referred to, resulted in the retention by Prince Edward Island, which has four senators, of her fourth member of the House of Commons (See also 5 Geo. V, c. 19). The total membership, therefore, of the House of Commons in the thirteenth and fourteenth Parliaments (elected in 1917 and 1921 respectively) was 235.

As the result of the Census of 1921, a new Representation Act was passed in 1924 (c. 63 of the Statutes of that year). This Act reduced the representatives of Nova Scotia from 16 to 14 and increased the representatives of Manitoba from 15 to 17, of Saskatchewan from 16 to 21,

of Alberta from 12 to 16 and of British Columbia from 13 to 14, the representation of the remaining provinces and of the Yukon Territory remaining unaffected. This Act thus increased the total membership of the House of Commons to 245 and has governed the representation in the fifteenth, sixteenth and seventeenth Parliaments. The representation in the next House of Commons as determined on the basis of the Census of 1931 by the Representation Act, 1933, has been already explained.

*Unit of Representation.*—While the number of the Members of the House of Commons has been growing steadily since Confederation, the unit of representation—one-sixty-fifth of the population of Quebec within its boundaries prior to the 1912 extension—has also been increased after each census in consequence of the expanding population of Quebec. The units of representation as shown by the seven decennial censuses taken since Confederation, are as follows:—1871, 18,331 persons; 1881, 20,908; 1891, 22,901; 1901, 25,368; 1911, 30,819; 1921, 36,283; 1931, 44,186. (1)

(1) The provisions of the B.N.A. Act establishing a fixed number of representatives for Quebec, etc., and providing for fractional representation, resolve certain problems that have proved embarrassing elsewhere (e.g. in the United States) as to total numbers and apportionment in legislative bodies. They do not, however, mitigate the responsibilities attaching in general to the use of a standard. In this connection it will be of value to point out, as a further plea for co-operation by the public, how essential it is to achieve the maximum of accuracy in taking the census. The practical issue may be stated as follows, the formula in each case being of the most obvious kind:

(a) What would be the effect on representation of an error, either of under-statement or of over-statement, in the census of Quebec, the standard province?

Let  $s$  represent the true population of the standard province,  $p$  that of any other province or all provinces,  $e$  the population included in the supposed error, and  $r$  the number of representative units resulting from that error.

$$\text{Then } \frac{65p}{s-e} - \frac{65p}{s} = r. \text{ Or,}$$

$$e = \frac{rs^2}{65p + rs}.$$

Applying this to the actual population figures of Quebec and the total of the other provinces as at the last census, the error which, if deducted from or added to the standard province, would give one representative unit too many or too few to the other provinces will be found to be 12,178. As one-half a representative unit may mean one representative, it follows that an error of 6,089 in taking the census of Quebec would on the average, under present population conditions in Canada, result in giving a member too many or too few to the rest of Canada.

(b) As a refinement we might ask, would an error in the standard province, Quebec, be equal in its incidence upon each of the other provinces? Obviously the answer is in the negative: an error in excess (or in defect) in a province with a larger population than the standard would be of less consequence to the representation of that province than would be an error in defect (or in excess) of the same magnitude in the standard province: the reverse would hold true in the case of a province with a smaller population than the standard province. (Let  $s$  represent the true population of the standard province;  $p$ , that of any other province. Let  $e_1$  represent an error in the standard province and  $e_2$  an error in any other province

which is to have the same effect as  $e_1$  in the standard. Then  $e_1 \times \frac{p}{s-e_1} = e_2$ . It is clear that  $e_2$  is

greater than  $e_1$  if  $p$  is greater than  $s-e_1$ ; on the other hand, that  $e_2$  is less than  $e_1$  if  $p$  is less than  $s-e_1$ . It may also be noted that if the census of Quebec should contain an error in defect (which would have the result of increasing representation outside of Quebec), the increase in representation would tend to be greater in Ontario than in the smaller provinces. If, on the other hand, the census of Quebec should be in error through excess (which would decrease representation in the rest of Canada), the smaller provinces would tend to lose in point of representation less than would Ontario.

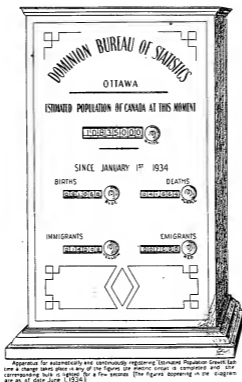
(c) The effect on representation of an error in the enumeration of another province than Quebec is, of course, the fraction that the error is of the unit of representation  $\left(\frac{65e}{s} = r, \text{ or } e = \frac{sr}{65}\right)$ . The

unit of representation by the recent census was 44,186. An error amounting to half of this or 22,093 would, on the average, affect representation by one member. Thus under present population conditions in Canada an error in the census of Quebec would be attended with nearly four times as serious consequences to representation in Parliament as a similar error elsewhere.

The fact that in 1898 an Act was passed by the Parliament of Canada (61 Vict., c. 3), with concurrent legislation by the province of Quebec (61 Vict., c. 6), declaring the northern boundary of Quebec to be the Eastmain River, etc., has led on different occasions to a discussion (for which the Bureau of Statistics was requested to supply certain data) as to what the effect on the representation of the various provinces in the House of Commons would have been had the Height of Land been accepted as the northern boundary in question. Prior to the construction of the National Transcontinental Railway the population of

### §31. Annual Estimates of Population

While the populations in different countries are actually counted at decennial or quinquennial intervals, annual estimates of population are required by modern states for many purposes, such as the calculation of birth, death and marriage rates, *per capita* figures of production, trade, finance, etc. A discussion of the method of arriving at these estimates in other countries and in Canada, together with the results for Canada for each year back to Confederation will be found in the Canada Year Book, 1932 pages 108-110.



(footnote continued)

Quebec north of the Height of Land was negligible, but in 1921 some 13,644 persons were found between there and the Eastmain River, while the population of New Quebec (*i.e.*, the portion north of the Eastmain River added by the Quebec Boundaries Extension Act, 1912), was 2,787, the latter total in accordance with the terms of the Act of 1912 being excluded in arriving at the unit of representation. The exclusion as well of the 13,644 persons above mentioned would have reduced the 1921 unit of representation from 36,283 to 36,073, and this in turn would have increased the representation of Nova Scotia and British Columbia from 14 to 15 members respectively, and the total membership of the House of Commons from 245 to 247, or 248 (according as to whether a member was or was not accorded to the excluded population). In 1931 the population between the Height of Land and the Eastmain River was 21,446 and the population in New Quebec 2,177, and the exclusion of both of these populations (instead of the latter alone) would have reduced the unit of representation from 44,186 to 43,856. No change, however, would in this case have been effected in the representation of any province. The discussion, though without practical bearing upon representation (on the interpretation that the Act of 1898 was a "declaration" and not an "extension" of the boundary), is of interest from a theoretical standpoint. The extension or contraction of a standard area has, of course, the effect of increasing or diminishing the unit of representation, and this in turn lowers or raises the total membership of the constituent body. Is it the case that so long as the proportion of the representatives of a province to the whole House remains the same under changes of this kind, the "weight" of the province in the whole House also remains the same? The answer is in the negative and that *representativeness* does not depend upon proportion alone but also to a degree upon the absolute number of representatives. In the present case, however, the smallness of the change makes the effect insignificant.

The apparatus illustrated herewith has been constructed in the Dominion Bureau of Statistics, whereby a continuous record is maintained of the probable population of the Dominion, the average intervals at which births, deaths, immigrant arrivals and emigrant departures according to the latest information, being recorded by parti-coloured flash-lights, while the net result on population increase is shown on the topmost indicator.

### §32. Conclusion

The large and varied nature of the census investigation has been dwelt upon in the preceding pages, and an account given of the administrative procedure involved, as well as of the salient results. In conclusion, it remains but to express the hope that these results, by the increased facilities they offer for the study of the social and economic problems of Canada may be found of a value commensurate with the labour and outlay which their collection and compilation has entailed. To the staff of the Bureau immediately concerned in the direction of the census, an expression of appreciation is due for unremitting devotion over a period of years to an exacting and responsible duty,—in particular to Mr. E. S. Macphail<sup>1</sup>, Chief, and Mr. A. J. Pelletier, Assistant Chief, of the Census Branch of the Bureau; to Mr. M. C. MacLean, Chief of Census Analysis; to Mr. H. Marshall, and Mr. J. C. Brady, in charge respectively of the Census of Merchandising and Service Establishments and of the Census of Institutions; and to Mr. O. A. Lemieux and Mr. A. H. LeNevou, in charge respectively of the compilation of the Census of Agriculture and of the Occupations and Unemployment sections of the Population Census.

I have the honour to be, Sir,

Your obedient servant,

R. H. COATS,

*Dominion Statistician.*

Dominion Bureau of Statistics, Ottawa,

June 1, 1934.

## APPENDIX I

SECTIONS OF THE STATISTICS ACT, 1918, RELATING TO THE  
CENSUS OF POPULATION AND AGRICULTURE.

(Revised Statutes of Canada, 1927, Chap. 190—SECTIONS 3, 4, 5, 6, 7, 8, 11, 12,  
13, 14, 15, 16, 17, 18, 19, 35, 36, 37, 38, 39, 48.)

3. There shall be a bureau under the Minister of Trade and Commerce, to be called the Dominion Bureau of Statistics, the duties of which shall be
- Dominion  
Bureau of  
Statistics.
- (a) to collect, abstract, compile and publish statistical information relative to the commercial, industrial, social, economic and general activities and condition of the people;
- To collect  
statistical  
information.
- (b) to collaborate with all other departments of the Government in the compilation and publication of statistical records of administration according to the regulations;
- To collaborate  
with other  
Government  
departments.
- (c) to take the census of the Dominion as hereinafter provided. 1918, c. 43, s. 3.
- To take  
the census.
4. The Governor in Council may appoint an officer to be called the Dominion Statistician, who shall hold office during pleasure, whose duties shall be, under the direction of the Minister, to prepare all schedules, forms, and instructions, and generally to supervise and control the Bureau, and to report annually to the Minister with regard to the work of the Bureau during the preceding year.
- Dominion  
Statistician  
appointment  
and duties.
2. Such other officers, clerks and employees as are necessary for the proper conduct of the business of the Bureau may be appointed in the manner authorized by law, and shall hold office during pleasure. 1918, c. 43, s. 4; 1918, c. 12.
- Officials.
5. The Minister may employ from time to time, in the manner authorized by law, such commissioners, enumerators, agents or persons as are necessary to collect statistics and information for the Bureau relating to such industries and affairs of the country as he deems useful and in the public interest, and the duties of such agents or persons shall be such as the Minister determines. 1918, c. 43, s. 5.
- Commis-  
sioners,  
enumera-  
tors,  
and  
agents.
6. Every officer, census commissioner, enumerator, agent and other person employed in the execution of any duty under this Act or under any regulation made hereunder, before entering on his duties, shall take and subscribe the following oath:—
- Oath of  
office.
- I, ....., solemnly swear that I will faithfully and honestly fulfil my duties as ..... in conformity with the requirements of the Statistics Act and of all proclamations, orders in council and instructions issued in pursuance thereof, and that I will not, without due authority in that behalf, disclose or make known any matter or thing which comes to my knowledge by reason of my employment as such.....
2. The oath shall be taken before such person, and returned and recorded in such manner as the Minister prescribes. 1918, c. 43, s. 6.
- Attestation.
7. The Minister shall
- (a) make and prescribe such rules, regulations, instructions, schedules and forms as he deems requisite for conducting the work and business of the Bureau, the collecting of statistics and other information and taking of any census authorized by this Act;
- Rules,  
regulations  
and forms.
- (b) prescribe what schedules, returns and information are to be verified by oath, the form of oath to be taken, and shall specify the officers and persons by and before whom the said oaths are to be taken. 1918, c. 43, s. 7.
- Verification  
by oath.
8. The Governor in Council shall not, nor shall the Minister, in the execution of the powers conferred by this Act, discriminate between individuals or companies to the prejudice of any such individual or company. 1918, c. 43, s. 8.
- No discrim-  
ination.
11. The Minister may, by special letter of instruction, direct any officer, census commissioner or other person employed in the execution of this Act, to make inquiry under oath as to any matter connected with the taking of the census or the collection of statistics or other information, or the ascertaining or correction of any supposed defect or inaccuracy therein; and such officer, census commissioner or other person shall then have the same power as is vested in any court of justice, of summoning any person, of enforcing his attendance and of requiring and compelling him to give evidence on oath, whether orally or in writing, and to produce such documents and things as such officer, census commissioner or other person deems requisite to the full investigation of such matter or matters. 1918, c. 43, s. 11.
- Inquiries  
under oath.
12. (a) Any letter purporting to be signed by the Minister or the Dominion Statistician, or by any other person thereunto authorized by the Governor in Council, and notifying any appointment or removal of or setting forth any instructions to any person employed in the execution of this Act;
- Evidence of  
appointment,  
removal or  
instructions.

(b) Any letter signed by any officer, census commissioner, or other person thereunto duly authorized, notifying any appointment or removal of or setting forth any instructions to any person employed under the superintendence of the signer thereof; shall be, respectively, *prima facie* evidence of such appointment, removal or instructions, and that such letter was signed and addressed as it purports to be. 1918, c. 43, s. 12.

## Presumption

13. Any document or paper, written or printed, purporting to be a form authorized for use in the taking of census, or the collection of statistics or other information, or to set forth any instructions relative thereto, which is produced by any person employed in the execution of this Act, as being such form or as setting forth such instructions, shall be presumed to have been supplied by the proper authority to the person so producing it, and shall be *prima facie* evidence of all instructions therein set forth. 1918, c. 43, s. 13.

## Remuneration.

14. The Minister shall, subject to the approval of the Governor in Council, cause to be prepared one or more tables setting forth the rates of remuneration or allowances for the several census commissioners, enumerators, agents and other persons employed in the execution of this Act, which may be a fixed sum, a rate per diem, or a scale of fees, together with allowances for expenses.

## Voted by Parliament.

2. Such remuneration or allowances and all expenses incurred in carrying this Act into effect shall be paid out of such moneys as are provided by Parliament for that purpose.

## Condition of payment.

3. No remuneration or allowance shall be paid to any person for any service performed in connection with this Act until the service required of such person has been faithfully and entirely performed. 1918, c. 43, s. 14.

## SECRECY.

## No individual return to be published or divulged.

15. No individual return, and no part of an individual return, made, and no answer to any question put, for the purposes of this Act, except as hereinafter set forth, shall, without the previous consent in writing of the person or of the owner for the time being of the undertaking in relation to which the return or answer was made or given, be published, nor except for the purposes of a prosecution under this Act, shall any person not engaged in connection with the census be permitted to see any such individual return or any such part of any individual return.

## No report to reveal individual particulars.

2. No report, summary of statistics or other publication under this Act, except as aforesaid, shall contain any of the particulars comprised in any individual return so arranged as to enable any person to identify any particulars so published as being particulars relating to any individual person or business. 1918, c. 43, s. 15; 1919, c. 8, s. 1.

## CENSUS OF POPULATION AND AGRICULTURE.

## Census of population and agriculture every tenth year.

16. The census of population and agriculture of Canada shall be taken by the Bureau under the direction of the Minister, on a date in the month of June in the year one thousand nine hundred and thirty-one, to be fixed by the Governor in Council, and every tenth year thereafter. 1918, c. 43, s. 16.

## Manitoba, Saskatchewan and Alberta.

17. A census of population and agriculture of the provinces of Manitoba, Saskatchewan and Alberta shall be taken by the Bureau, under the direction of the Minister, on a date in the month of June in the year one thousand nine hundred and thirty-six, to be fixed by the Governor in Council, and every tenth year thereafter. 1918, c. 43, s. 17.

## Census districts.

18. The Governor in Council shall divide the country in respect of which the census is to be taken into census districts, and each census district into subdistricts to correspond respectively, as nearly as may be, with the electoral divisions and subdivisions for the time being, and, in territories not so defined or so situated as to admit of adhering to boundaries already established, into special divisions and subdivisions, for the purpose of the census. 1918, c. 43, s. 18.

## Details.

19. Each census of population and agriculture shall be so taken as to ascertain with the utmost possible accuracy for the various territorial divisions of Canada, or of the provinces of Manitoba, Saskatchewan and Alberta as the case may be,

- (a) their population and the classification thereof, as regards name, age, sex, conjugal condition, relation to head of household, nationality, race, education, wage-earnings, religion, profession or occupation and otherwise;
- (b) the number of houses for habitation, whether occupied or vacant, under construction or otherwise, the materials thereof and the number of rooms inhabited;
- (c) the area of occupied land and its value, and its condition thereof as improved for cultivation, in fallow, in forest, unbroken prairie, marsh or waste land, and otherwise; the tenure and acreage of farms and the value of farm buildings and implements;
- (d) the products of farms, with the values of such products and the number and value of domestic animals within the preceding census or calendar year;
- (e) the municipal, educational, charitable, penal and other institutions thereof; and
- (f) such other matters as may be prescribed by the Governor in Council. 1918, c. 43, s. 19.

# CENSUS OF CANADA, 1931

## OFFENCES AND PENALTIES.

- 35.** Every person employed in the execution of any duty under this Act or any regulation who,
- (a) after having taken the prescribed oath, shall desert from his duty, or wilfully makes any false declaration, statement or return touching any such matter; or
  - (b) in the pretended performance of his duties thereunder, obtains or seeks to obtain information which he is not duly authorized to obtain; or
  - (c) shall not keep inviolate the secrecy of the information gathered or entered on the schedules and forms, and who shall, except as allowed by this Act and the regulations, divulge the contents of any schedule or form filled up in pursuance of this Act or any regulation, or any information furnished in pursuance of this Act or any regulation;
- shall be guilty of an offence and shall be liable, on summary conviction, to a penalty not exceeding three hundred dollars and not less than fifty dollars, or to imprisonment for a period not exceeding six months and not less than one month, or to both fine and imprisonment. 1918, c. 43, s. 36.
- Desertion or false declaration.  
Unlawful information.  
Improperly divulging information.  
  
Penalty.
- 36.** Every person who, without lawful excuse,
- (a) refuses or neglects to answer, or wilfully answers falsely, any question requisite for obtaining any information sought in respect of the objects of this Act or any regulation, or pertinent thereto, which has been asked of him by any person employed in the execution of any duty under this Act or any regulation; or
  - (b) refuses or neglects to furnish any information or to fill up to the best of his knowledge and belief any schedule or form which he has been required to fill up, and to return the same when and as required of him under this Act or any regulation, or wilfully gives false information or practises any other deception thereunder;
- shall, for every such refusal or neglect, or false answer or deception, be guilty of an offence and liable, upon summary conviction, to a penalty not exceeding one hundred dollars and not less than twenty dollars, or to imprisonment for a period not exceeding three months and not less than thirty days, or to both fine and imprisonment. 1918, c. 43, s. 37.
- Refusal to answer or false answer.  
Refusal or neglect, false information or deception.  
  
Penalty.
- 37.** Every person who has the custody or charge of any provincial, municipal or other public records or documents, or of any records or documents of any corporation, from which information sought in respect of the objects of this Act or any regulation can be obtained, or which would aid in the completion or correction thereof, who wilfully or without lawful excuse refuses or neglects to grant access thereto to any census officer, commissioner, enumerator, agent or other person deputed for that purpose by the Dominion Statistician, and every person who wilfully hinders or seeks to prevent or obstruct such access, or otherwise in any way wilfully obstructs or seeks to obstruct any person employed in the execution of any duty under this Act or any regulation, is guilty of an offence and shall be liable, upon summary conviction, to a penalty not exceeding three hundred dollars and not less than fifty dollars, or to imprisonment for a period not exceeding six months and not less than one month, or to both fine and imprisonment. 1918, c. 43, s. 38.
- Wilful refusal or neglect to grant access to records.  
  
Penalty.
- 38.** The leaving by an enumerator, agent or other person employed in the execution of this Act or any regulation, at any house or part of a house, of any schedule or form purporting to be issued under this Act or any regulation, and having thereon a notice requiring that it be filled up and signed within a stated time by the occupant of such house or part of a house, or in his absence by some other member of the family, shall, as against the occupant, be a sufficient requirement so to fill up and sign the schedule or form, though the occupant is not named in the notice, or personally served therewith. 1918, c. 43, s. 39.
- Leaving notice at house.
- 39.** The leaving by an enumerator or agent or other person employed in the execution of this Act or any regulation, at the office or other place of business of any person or firm or of any body corporate or politic, or the delivery by registered letter to any person, firm or body corporate or politic or his or its agent, of any such schedule or form having thereon a notice requiring that it be filled up and signed within a stated time, shall, as against the person or the firm and the members thereof and each of them or the body corporate or politic, be a sufficient requirement to fill up and sign the schedule or form, and if so required in the notice, to mail the schedule or form within a stated time to the Bureau. 1918, c. 43, s. 40.
- Leaving notice at office.
- 40.** Any fine imposed and recovered for any offence under this Act shall belong to His Majesty for the public uses of Canada, but the Minister may authorize the payment of one-half of any such fine to the prosecutor. 1918, c. 43, s. 41.
- Application of fines.

# CENSUS OF CANADA, 1931

FORM 1

## APPENDIX II

### SCHEDULES, SEVENTH CENSUS OF CANADA, 1931

#### Population

Province..... Electoral District..... Subdistrict No. ....  
(Write name and number).

in municipality of.....  
(Insert name and state whether city, town, village or rural municipality).

Number in the order of visitation		Name and Residence		Description of Home					
Dwelling house	Family, house- hold or insti- tution	Name  of each person in family, household or institution	Place of Abode	Home owned or rented	If owned give value. If rented, give rent paid per month	Class of house (See instruc- tions)	Materials of con- struction (See instruc- tions)	Rooms occupied by this family	Has this family a radio?
			(In rural localities give parish or town- ship. In cities, towns and villages, give street and number of dwelling)						
1	2	3	4	5	6	7	8	9	10

Personal Description				Place of Birth			Immigration		Nationality and Racial Origin	
Rela- tionship to head of family or house- hold	Sex	Single, married, widowed, divorced	Age at last birth- day	Country or place of birth of this person and of parents of this person. If born in Canada give province. If foreign-born give country. (See instructions)			Year of immigra- tion to Canada	Year of natu- raliza- tion	Nationality  (Country to which this person owes allegiance)	Racial origin
				Person	Father	Mother				
11	12	13	14	15	16	17	18	19	20	21

Language			Religion	Education		Occupation and Industry			
Can speak Eng- lish	Can speak French	Language other than English or French spoken as Mother tongue	Religious body, Denomi- nation or Community, to which this person adheres or belongs	Can read and write	Months at school since Sept. 1, 1930	Occupation	Industry		Total earnings in the past twelve months (Since June 1, 1930)
						Trade, profession or particular kind of work, as carpenter, weaver, merchant, farmer, salesman, teacher, etc. (Give as defi- nite and precise information as possible)	Industry or business in which engaged or employed as cotton mill, brass foundry, grocery, coal mine, dairy farm, public school, business college, etc.	Class of worker	
22	23	24	25	26	27	28	29	30	31

#### Unemployment

If an employee, were you at work Monday, June 1, 1931	If answer to previous question is NO, Why were you not at work on Monday, June 1, 1931. (For example, no job, sick, accident, on holidays, strike or lockout, plant closed, no materials, etc.)	Total number of weeks unemployed from any cause in the last 12 months	Of the total number of weeks reported out of work in column 34, how many were due to—						
			No Job	Illness	Accident	Strike or Lockout	Tempo- rary Lay-off	Other causes. (See instruc- tions 184)	
32	33	34	35	36	37	38	39	40	

**CLOSED HOUSE CARD****FORM 5**

(To be used in reporting closed houses or dwellings in cities or towns)

**PERMANENT HOME OF THIS FAMILY**

City or town.....Street.....No.....  
 District.....Subdistrict No.....  
 Name head of family.....  
 Number of persons in family.....

**TEMPORARY HOME OF THIS FAMILY**

Province.....County or District.....  
 Post Office Address.....  
 (Signed).....Enumerator  
 Day.....Month.....  
 (See Instructions)

**ABSENTEE FAMILY CARD****FORM 6**

To be used in reporting family occupying temporary home or lodgings in enumerator's Subdistrict

Name head of family.....  
 Number of persons in family.....  
**PERMANENT HOME:** City or town.....  
 Street.....House No.....  
 Province.....County or District.....

(Page and line of population schedule upon which this family is enumerated by me)

Page.....Line.....  
 Enumerator's name.....  
 Census District.....Subdistrict No.....  
 Day.....Month.....  
 (See Instructions)

## FORM 4

## Individual Form—Population

Province.....Electoral District.....Enumeration Subdistrict.....

Write name

Number

For boarders, lodgers, miners, employees on railway construction, etc., who may be out of reach when the enumerator calls upon the head of the family or household.

1. House number on Schedule.....2 Family number on Schedule.....
  3. Name of person.....
  4. Relationship to head of household.....5 Sex.....
  6. Single, married, widowed, or divorced.....7 Age.....
  8. Country or place of birth of yourself.....of your father.....  
(if born in Canada give province)
  - ....., of your mother.....
  9. Year of immigration to Canada.....10 Year of naturalization.....
  11. Nationality.....12 Racial origin.....  
(country to which you owe allegiance)
  13. Can you speak English?.....14 Can you speak French?.....
  15. Language other than English or French spoken, by you, as Mother tongue.....
  16. Religion.....17 Can you read?.....18 Can you write?.....
  19. Months at school (if of school age) since September 1, 1930.....
  20. What is your trade, profession or usual occupation as carpenter, painter, brass polisher, insurance agent, etc.?.....
  21. Industry or kind of business in which engaged or employed, as saw mill, cotton mill, coal mine, grocery store, etc.....
  22. Are you an employer, employee, or working on your own account?.....
  23. If an employee give total earnings in past 12 months (since June 1, 1930) \$.....
  24. If an employee were you at work Monday, June 1, 1931?.....
  25. If you were not at work on Monday, June 1, why were you not at work?.....
  26. State the number of weeks, if any, you were out of work in the past 12 months (since June 1, 1930).....
  27. Of the total number of weeks you were out of work since June 1, 1930, how many were due to  
having no job?.....to illness?.....to accident?.....to a strike or lock-  
(weeks) (weeks) (weeks) (weeks)  
out?.....to temporary lay-off?.....to other causes?.....  
(weeks) (weeks) (state causes and weeks)
  28. Post Office address of home.....
- The foregoing form is to be filled out by the head of the family or household or person named in the Schedule and delivered to the undersigned, when called for, not later than the.....day of....., 1931.

.....Enumerator.  
Fill in date and sign form before leaving the schedule

## FORM 7

## Supplemental Schedule for the Blind and for the Deaf

Province ..... Electoral District ..... Enumeration Subdistrict .....  
 (Write name) (Number) (Number)

Municipality .....  
 (Write name)

1. The purpose of this schedule is to obtain a record of every person who is blind and of every person who is deaf or a deaf-mute according to the headings of the columns.

2. **Blind.**—Include as Blind any person who cannot see to read the heading to this schedule at a distance of one foot, even with the aid of glasses. The test in the case of children under ten years of age must be whether they can distinguish and recognize objects, such as an apple or a base-ball at a distance of about two feet; the same test should be applied to older persons who are illiterate. Do not include any person who is blind in one eye only.

3. **Deaf-mutes.**—Include as Deaf-mutes any person who has been totally deaf from birth. In general persons who cannot hear nor talk. In addition, a record will be made for adult persons who have become deaf either from injury, old age or otherwise.

**IMPORTANT.**—The names of all persons recorded on this special schedule must also appear on the population schedule and the facts required thereon carefully entered.

4. **Column 1.**—In column 1 enter the page of the population schedule on which this name appears.
5. **Column 2.**—In this column enter the number of the line of the page of the population schedule on which this name appears.
6. **Column 3.**—In this column enter the name of the person. The name should be entered exactly as it is on the population schedule.
7. **Column 4.**—In this column the enumerator will enter the post office address or Rural Route number, and the Municipality of residence of every person whose name is entered in column 3. In the case of persons under 18 years of age the name of the parent or guardian, with his or her address, will be entered in column 4.
8. **Column 5.**—In this column the enumerator will enter the infirmity from which the person suffers, whether Blind, Deaf, or Deaf-mute, or Blind and Deaf, or Blind and Deaf-mute.
9. **Column 6.**—In column 6 enter the age at which the person, whose name appears in column 3, became blind or totally deaf. If the person was born blind or deaf write "at birth". If the affliction was of a later period give the age in months or years at which the person became blind or totally deaf.
10. **Column 7.**—The enumerator should endeavour to obtain the cause which resulted in this person being blind or totally deaf and make the entry in column 7. If from birth write "at birth", if not born blind or deaf, the cause which produced the blindness or deafness should be ascertained and entered, as for example:—Measles, Scarlet Fever, Old Age, Injury, etc. If injury was the cause of the defect, the kind of injury should be stated as War, Chemical Explosion, Gun Shot, Automobile Accident, etc.
11. **Column 8.**—In the case of many blind persons and many deaf-mutes, they may be at institutions of learning at the date of the Census or when the enumerator calls. In such cases, the enumerator must find out the present address of the person, and if in an institution, its name and location, and enter it in column 8.

Entry Number	Population Schedule Reference to		Name of Person	Post Office Address or R.R. of Person or of Parent or Guardian. In cities and towns give street and house number
	Page	Line		
	1	2	3	4
Whether Blind, or Deaf, or Deaf-mute	Age when person became blind or totally deaf		Cause of blindness or deafness (See instruction on this inquiry)	If not living at home give present address of person If in Institution give name and address
5	6		7	8

The information on this report will not be used as a basis for taxation.

## THIS REPORT IS ABSOLUTELY CONFIDENTIAL

## FORM 2

CENSUS OF AGRICULTURE  
(GENERAL FARM SCHEDULE)

## DOMINION BUREAU OF STATISTICS

R. H. COATS, DOMINION STATISTICIAN

## SEVENTH CENSUS OF CANADA

1931

## LOCATION OF FARM

Prov..... Elect. Dist.....

Municipality..... (If Improvement District give number)

Enumeration Subdistrict No.....

(Sec..... Tp..... R..... M.....

Sec..... Tp..... R..... M.....

Sec..... Tp..... R..... M.....

Sec..... Tp..... R..... M.....

(Use separate line for each section or part of section)

1. All questions must be answered. Inability to obtain exact data does not justify failure to answer. The census returns that the circumstances permit must be obtained. If farm records or accounts are kept, take information from them. If such records are not available, careful estimates should be made in all cases be obtained or made.

2. Farm Operator. All replies on this schedule should relate to the farm occupied June 1, 1931, by the person named "Farm Operator" in the census. This person is designated as the person who directly works the farm, whether as owner, hired manager, tenant or cropper. Note carefully

## FARM OPERATOR, JUNE 1, 1931

1. Name..... Age.....  
2. Post Office address.....  
3. Birthplace.....  
4. How long have you lived in Canada (if not Canadian-born)?..... years  
5. How many years have you farmed (a) as Owner?..... years (b) as Tenant?..... years  
6. How long have you operated the farm you now occupy?..... years..... months

## FARM WORKERS 1930

7. How many persons 14 years of age and over were employed the year round on this farm in 1930? (exclusive of family (including operator), M..... F..... (b) hired men, No.....  
(a) full time, M..... F..... (c) part time, M..... F.....  
8. How many persons were hired temporarily for seasonal work on this farm in 1930? (exclusive of housework), M..... F.....

## FARM POPULATION 1931

9. Total number of persons, all ages, living on this farm June 1, 1931? M..... F.....  
10. How many persons left this farm in the last 12 months to live permanently in a city, town or village? M..... F.....  
11. How many persons who formerly lived in a city, town or village have in the last 12 months come to live permanently on this farm? M..... F.....

## FARM ACREAGE AND TENURE, JUNE 1, 1931

12. Total number of acres in this farm..... or persons named under inquiry No. 1, including out-lying lands operated by..... or persons named under inquiry No. 1, including out-lying lands operated by..... separate fields, pasture or woodland which are situated in your enumeration sub-district.....  
13. How many acres in this farm do you (a) own?..... (b) rent from others?  
14. How many acres of land rented are improved?  
15. What do you pay as rent per year? (If rent paid in kind give cash value) \$.....  
16. Do you operate this farm on shares? (If answer "Yes" give fraction paid as 1, 1/2, etc.) (Answer Yes or No. If answer "Yes" give fraction paid as 1, 1/2, etc.)  
17. Do you operate this farm for others as hired manager? (Answer Yes or No).....

## ENUMERATOR'S RECORD

Number of farm in order of visitation.....

Page and line on which name of operator Page.....  
on population schedule is written Line.....

Date enumerated, day..... month.....

Signed..... Enumerator

Checked by..... Commissioner

that farms should be returned in the name of the person actually conducting the agricultural operations.  
3. Definition of Farm. Include as a "Farm" every tract of land of one acre or more which produced in the year 1930 agricultural products to the value of \$50 or over or which under crop of any kind or employed for pasturing in 1931.

4. Occupied Farm Land has reference only to the land occupied and used for agricultural purposes situated within the enumeration sub-district assigned to the enumerator on June 1, 1931. It does not refer to land held or occupied outside of the enumerator's district.

Crops harvested on this farm in 1930 (whether by present occupier or not)			
Area under crop (Give in this column the total number of acres sown or planted on farm for crop in 1930)	Quantity harvested (Give total production whether sold, kept on farm for seed or other purpose)	Crop failure (Area sown or planted from which no crops were harvested because of crop failure. This area is included in the other column 1. Give cause, hail, drought, etc.)	
1	2	3	4
<b>Grains:</b>			
49. Wheat, fall sown.....	bu.....		
50. Durum wheat, spring sown.....	bu.....		
51. Other wheat, spring sown.....	bu.....		
52. Barley.....	bu.....		
53. Oats.....	bu.....		
54. Rye, fall sown.....	bu.....		
55. Rye, spring sown.....	bu.....		
56. Corn, for husking.....	bu.....		
57. Potatoes.....	bu.....		
58. Flax, for seed.....	bu.....		

Do not report vacant or abandoned

nor communicated to any assessor, or other government department.

CONDITION OF FARM LAND		FARM VALUES, JUNE 1, 1931		FARM MORTGAGE, JUNE 1, 1931		FARM EXPENSES ON THIS FARM IN 1930		FARM FACILITIES, JUNE 1, 1931	
18. Acres of improved land in this farm in 1931.	ac.	28. Total value of this farm (including land and buildings).	\$	31. Total mortgage on this farm, June 1, 1931 \$	Interest paid in 1930 \$	32. Amount expended in 1930 for hay, grain, mill feed and other products (not including those for use as seed for domestic animals and poultry)	\$	41. What kind of road adjoins this farm?	
19. Acres of land which has been brought under cultivation, and is now fit for the plough, including orchards, gardens, and land occupied by buildings)	ac.	(Give the value of the land which would sell under ordinary conditions)	\$	If there was no mortgage write "none". Report only for owned farms.		(Amount expended in 1930 for use as seed for domestic animals and poultry)	\$	(Indicate whether asphalt, concrete, macadam, gravel, improved or unimproved dirt road)	
20. Acres of woodland in this farm in 1931.	ac.	29. Value of all buildings included in 28.	\$			33. Amount expended in 1930 for spraying chemicals.	\$	42. Distance in miles to nearest market town.	
21. Acres of unbroken prairie or natural pasture in this farm in 1931.	ac.	(In the case of institutions include only the value of buildings used for farm purposes)	\$			34. Amount expended in 1930 for garden seeds.	\$	43. Give the number on this form of the following:	
22. Acres of improved prairie or natural pasture in this farm in 1931.	ac.	30. Value of all implements and machinery used on this farm.	\$			35. Amount paid for electric current for light and power in 1930.	\$	(a) Tractors.	
23. Number of forest trees planted and growing on this farm in 1931.	ac.	(Include threshing machines, engines, motors, automobiles, trucks, combines, tools, wagons, carriages, harness, dairy apparatus, etc.)	\$			36. Amount paid or payable on land and buildings of this farm in 1930. (Do not include income tax or poll tax).	\$	(b) Automobiles.	
24. How many acres of the improved land will be under pasture in 1931?	ac.		\$			37. Taxes paid or payable on land and buildings of this farm in 1930. (Do not include income tax or poll tax).	\$	(c) Bicycles.	
25. How many acres of improved land in this farm in 1930?	ac.		\$			38. Amount expended in money in 1930 for farm labour (exclusive of housework).	\$	(d) Motor trucks.	
26. How many acres of the improved land were in pasture in 1930?	ac.		\$			39. Number of weeks of farm work done by hired labour, all ages, in 1930.	Weeks.	(e) Headers.	
27. How many acres of the improved land were summer fallowed in 1930?	ac.		\$			40. Estimated value of horse or of team and board furnished farm labourers in 1930 (exclusive of housework).	\$	(f) Cows.	
28. How many acres of the improved land were summer fallowed in 1931?	ac.		\$					(g) Electric motors (for farm work).	
29. How many acres of the improved land were summer fallowed in 1931?	ac.		\$					(h) Gasoline engines (stationary).	
30. How many acres of the improved land were summer fallowed in 1931?	ac.		\$					(i) Electric motors (for kitchen).	
31. How many acres of the improved land were summer fallowed in 1931?	ac.		\$					(j) Has this farm house running water (a) in kitchen?	
32. How many acres of the improved land were summer fallowed in 1931?	ac.		\$					(k) Has this farm house a telephone?	
33. How many acres of the improved land were summer fallowed in 1931?	ac.		\$					(l) Has this farm house electric light?	
34. How many acres of the improved land were summer fallowed in 1931?	ac.		\$					(Answer Inquiries 44 to 48 by yes or no)	
35. How many acres of the improved land were summer fallowed in 1931?	ac.		\$						
36. How many acres of the improved land were summer fallowed in 1931?	ac.		\$						
37. How many acres of the improved land were summer fallowed in 1931?	ac.		\$						
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129. How many acres of the improved land were summer fallowed in 1931?	ac.		\$						
130. How many acres of the improved land were summer fallowed in 1931?	ac.		\$						
131. How many acres of the improved land were summer fallowed in 1931?	ac.		\$						
132. How many acres of the improved land were summer fallowed in 1931?	ac.		\$						
133. How many acres of the improved land were summer fallowed in 1931?	ac.		\$						
134. How many acres of the improved land were summer fallowed in 1931?	ac.		\$						
135. How many acres of the improved land were summer fallowed in 1931?	ac.		\$						
136. How many acres of the improved land were summer fallowed in 1931?	ac.		\$						
137. How many acres of the improved land were summer fallowed in 1931?	ac.		\$						
138. How many acres of the improved land were summer fallowed in 1931?	ac.		\$						
139. How many acres of the improved land were summer fallowed in 1931?	ac.		\$						
140. How many acres of the improved land were summer fallowed in 1931?	ac.		\$						
141. How many acres of the improved land were summer fallowed in 1931?	ac.		\$						
142. How many acres of the improved land were summer fallowed in 1931?	ac.		\$						
143. How many acres of the improved land were summer fallowed in 1931?	ac.		\$						
144. How many acres of the improved land were summer fallowed in 1931?	ac.		\$						
145. How many acres of the improved land were summer fallowed in 1931?	ac.		\$						
146. How many acres of the improved land were summer fallowed in 1931?	ac.		\$						
147. How many acres of the improved land were summer fallowed in 1931?	ac.		\$						
148. How many acres of the improved land were summer fallowed in 1931?	ac.		\$						
149. How many acres of the improved land were summer fallowed in 1931?	ac.		\$						
150. How many acres of the improved land were summer fallowed in 1931?	ac.		\$						
151. How many acres of the improved land were summer fallowed in 1931?	ac.		\$						
152. How many acres of the improved land were summer fallowed in 1931?	ac.		\$						
153. How many acres of the improved land were summer fallowed in 1931?	ac.		\$						
154. How many acres of the improved land were summer fallowed in 1931?	ac.		\$						
155. How many acres of the improved land were summer fallowed in 1931?	ac.		\$						
156. How many acres of the improved land were summer fallowed in 1931?	ac.		\$						
157. How many acres of the improved land were summer fallowed in 1931?	ac.		\$						
158. How many acres of the improved land were summer fallowed in 1931?	ac.		\$						
159. How many acres of the improved land were summer fallowed in 1931?	ac.		\$					</	

108. **Farm Garden:** Value of all vegetables (including onions, tomatoes, green peas, string beans, etc.), grown in 1930 for home use only. . . . . \$

Market Garden: (Vegetables produced mainly for sale, not for home use)	Harvested on this farm in 1930				Acres or fraction of an acre planted in 1931
	Acres or fraction of an acre	Quantity	Unit of measure	Value	
109. Asparagus . . . . .	1	2	3	4	5
110. Cabbages . . . . .					
111. Cauliflowers . . . . .					
112. Carrots . . . . .					
113. Cantaloupes and melons . . . . .					
114. Cucumbers . . . . .					
115. Green beans . . . . .					
116. Green peas . . . . .					
117. Lettuce . . . . .					
118. Onions . . . . .					
119. Sweet corn . . . . .					
120. Tomatoes . . . . .					
121. Carrots . . . . .					
122. Beets . . . . .					
123. Parsnips . . . . .					
124. Rhubarb . . . . .					
125. Other (give name) . . . . .					

Orchard Fruits: (Do not include nursery stock)	Products of 1930				Number of trees June 1, 1931	
	Quantity		Value	Net of bearing age	Of bearing age	
	Quantity	Value				
126. Apples . . . . .	bu.	\$				
127. Crab apples . . . . .	bu.	\$				
128. Peaches . . . . .	bu.	\$				
129. Pears . . . . .	bu.	\$				
130. Plums . . . . .	bu.	\$				
131. Cherries . . . . .	bu.	\$				
Total acreage under orchard June 1, 1931. . . . .	acres					

Small Fruits—Cultivated: (Do not include wild fruits)	Harvested on this farm in 1930			Acres or fraction of an acre under crop, 1931
	Acres or fraction of an acre	Quantity	Value	
132. Strawberries.....		qtls.	\$	
133. Raspberries.....		qtls.	\$	
134. Blackberries.....		qtls.	\$	
135. Currants, all kinds.....		qtls.	\$	
136. Loganberries.....		qtls.	\$	
137. Gooseberries.....		qtls.	\$	
138. Other (give name).....		qtls.	\$	

**Grapes grown on this farm:**  
139. Vines, June 1, 1931, not of bearing age. Number. . . . .  
140. Grapes (total production for all purposes in 1930), pounds. . . . .  
Total acreage under grapes June 1, 1931. . . . . acres

# **Milk produced in 1930:**

171. Cows milked in 1930, No. . . . . 172. Total milk produced in 1930, lb. . . . .  
Include milk fed to animals, consumed on farm, sold or otherwise disposed of (10 lb. = 1 gallon)

Disposition of MILK in 1930:			
173. Milk sold or sent to factory in 1930. . . . .	Quantity	Value	
174. Cream sold or sent to creamery on a fat basis in 1930. . . . .	lb.	\$	
(Give weight of butterfat only)			
175. Cream sold or sent to creamery, by measure, in 1930. . . . .	gal	\$	
(Do not include cream reported under No. 174)			
176. Butter made on this farm in 1930. . . . .	lb.	\$	
177. Butter made and sold in 1930. . . . .	lb.	\$	
178. Cheese made on this farm in 1930. . . . .	lb.	\$	

Sheep and Lambs, June 1, 1931:	
179. Rams under 1 year old. . . . .	Number
180. Ewes under 1 year old. . . . .	
181. Rams for breeding, 1 year old and over. . . . .	
182. Ewehens 1 year old and over. . . . .	

Wool Clip in 1930:	
183. Net weight of sheep shorn in 1930. . . . .	no.
184. Total weight and value of fleeces in 1930 (unwashed). . . . .	lb.

185. Goats, June 1, 1931: (all ages). No. . . . . Value \$

Swine, June 1, 1931:	
186. Young pigs under 6 months old. . . . .	Number
187. Sows kept for breeding, 6 months old and over. . . . .	
188. Boars for breeding purposes, 6 months old and over. . . . .	
189. All other hogs, 6 months old and over. . . . .	

Poultry, June 1, 1931:			
190. Hens, old stock. . . . .	Number	Value	
191. Chickens banded in 1931. . . . .			
192. Turkeys, all ages. . . . .			
193. Ducks and ducklings. . . . .			
194. Geese and goslings. . . . .			
195. Other. . . . .			
(Give name)			

Eggs and Chickens produced on this farm in 1930:			
196. Eggs produced in 1930 (include only hen eggs produced whether sold, used, incubated or otherwise disposed of)	Quantity	Value	
197. Eggs sold in 1930 (produced on this farm). . . . .	doz.	\$	
198. Chickens raised in 1930 (include all chickens, whether sold, consumed or on hand)	no.		

Bees and Bee Products:	
199. Hives of bees, June 1, 1931. . . . .	Quantity
200. Honey produced in 1930. . . . .	lb.
201. Beeswax produced in 1930. . . . .	lb.

**Young animals raised on this farm in 1930:** (Include all young animals born in 1930 whether retained on the farm, sold to others, or slaughtered for food. Do not include any young animals purchased or any that died)

202. Cattle and calves, Number. . . . . 204. Calves, Number. . . . .  
203. Lambs, Number. . . . . 205. Pigs, Number. . . . .

# Greenhouse and Hot-house Establishments:

141. Total square feet under glass, June 1, 1931..... sq. ft.
142. Number of acres covered by greenhouses, hothouses and frames)..... acres
143. Amount received from sale of flowers, flowering plants, etc., during 1930 \$.....
144. Amount received from sale of vegetables and vegetable plants during 1930 \$.....

# Nursery Acreage and Value of Products:

145. Number of acres used for growing trees, plants, etc., in 1931..... acres
146. Amount received from sale of nursery products in 1930..... \$.....

# Forest products cut on this farm in 1930:

	Used on Farm		Quantity	Value	Sold
	Quantity	Value			
147. Firewood (Soft wood..... cords..... \$.....					
148. Fence posts..... Hard wood..... cords..... \$.....					
149. Fence rails..... do..... no..... \$.....					
150. Railway ties..... do..... no..... \$.....					
151. Telegraph and telephone poles..... x x x x \$.....					
152. Posts for fencing..... x x x x \$.....					
153. Logs for lumber..... M ft. B. M. \$.....					
154. Other (state kind)..... \$.....					

# Maple Syrup and Sugar:

155. Maple syrup made in 1931..... lb.....	Quantity	Value
156. Maple syrup made in 1931..... x x x \$.....		
157. Maple sugar made in 1931..... lb.....		

# LIVE STOCK ON THIS FARM, JUNE 1, 1931, AND ANIMAL PRODUCTS, 1930

Horses, June 1, 1931:		Number	Value
158. Colts and fillies under 1 year of age.....			
159. Mares 2 years old and under 2 years.....			
160. Mares 2 years old and over.....			
161. Geldings 2 years old and over.....			
162. Stallions 2 years old and over (for breeding).....			

163. Mules and mule colts on this farm, June 1, 1931: No.....	Value \$.....
---	---------------

# Cattle on this farm, June 1, 1931:

	Number	Value
164. Calves under 1 year of age.....		
165. Heifers 1 year old and under 2 years.....		
166. Cows 2 years old and under 2 years.....		
167. Cows and heifers 2 years old and over, in milk or in calf.....		
168. Steers 1 year old and under 2 years.....		
169. Steers 2 years old and over.....		
170. Bulls 1 year old and over.....		

# Domestic animals and poultry slaughtered on this farm in 1930 for home use or for sale: (Include only animals raised on this farm)

	No.	Value	No.	Value
206. Cattle.....	210.		210.	
207. Calves.....	211.		211.	
208. Sheep and lambs.....	212.		212.	
209. Swine.....	213.		213.	

# Domestic animals and poultry sold alive in 1930: (Include only animals raised on this farm)

	No.	Value	No.	Value
214. Horses.....	221.		221.	
215. Colts and fillies.....	222.		222.	
216. Milch cows.....	223.		223.	
217. Calves.....	224.		224.	
218. Other cattle.....	225.		225.	
219. Sheep.....	226.		226.	
220. Lambs.....	227.		227.	

Animals bought in 1930, by this farm (Do not include purchases by drovers or dealers)		Number bought in 1930		Of number bought in 1930 how many were	
228. Horses.....	1	2	3	x	x
229. Steers.....					
230. Cows and heifers.....					
231. Calves.....					
232. Sheep and lambs.....					
233. Pigs (born in 1930).....					

Animals slaughtered in 1930		On farm	
234. Horses.....			
235. Steers.....			
236. Cows and heifers.....			
237. Calves.....			
238. Sheep and lambs.....			
239. Swine.....			

Pure-bred animals, June 1, 1931: (Report the number and breed of any animals on this farm that are registered or are eligible for registration. All animals reported here must be included under Inquiries 158-190.)		Glve Breed	
234. Mares and fillies.....			
235. Stallions and stallion colts.....			
236. Cows and heifers, all ages.....			
237. Bulls and bull calves.....			
238. Sheep and lambs.....			
239. Swine.....			

Co-operation in marketing, in 1930: (Include only products of this farm sold to or through a farmers' marketing organization.)		Number	
241. Eggs.....	245.		
242. Wool.....	246.		
243. Sheep and lambs.....	247.		
244. Poultry, all kinds.....	248.		

Co-operative purchasing of farm supplies, in 1930:		Value of supplies bought, from or through a farmers' co-operative organization \$	
253. Value of supplies bought, from or through a farmers' co-operative organization \$.....			
254. Specify articles bought.....			

## FORM 2A

## Vacant Farms and Abandoned Farms

## CENSUS OF AGRICULTURE

## DOMINION BUREAU OF STATISTICS

R. H. COMBS, Dominion Statistician

## SEVENTH CENSUS OF CANADA, 1931

Enumerator's Record

Number of this farm in regular order of visitation.....

Enumerated this ..... day of ..... 1931

Signed..... Enumerator.

Checked by..... Commissioner.

The information required on this schedule has reference only to "vacant farms" and "abandoned farms"; that is to parcels of land, part or all of which had been brought under the plough and cropped but are now uncultivated; in the Prairie Provinces it refers to farms upon which a certain amount of breaking was done and crops grown, and in the other provinces to farms, part or all of which had been cleared of trees and stumps and cropped but are now either "vacant" or "abandoned."

**VACANT FARMS.**—A "vacant" farm is one which is unoccupied at the date of the Census and on which a crop of any kind was not harvested in 1930 nor is under crops of any kind in 1931. If, however, the farm is enclosed and used for pasture it should not be classed as a vacant farm but should be enumerated on the regular farm schedule as an "occupied farm." Great care should be taken to report all farms properly, whether as "Occupied farms," "Vacant farms" or "Abandoned farms."

**ABANDONED FARMS.**—An "abandoned" farm is one which has been unoccupied during the last several years, is in arrears for taxes, and has to all appearances been deserted by the owner. If, however, taxes have been paid, the farm should be classed as a "vacant farm" and not as an "abandoned farm," the payment of taxes indicating that the owner has not deserted the farm but intends to re-occupy it at a later date. The enumerator should make careful inquiry on this point so that the farm may be properly classified either as an abandoned farm or as a vacant farm.

Information to reply to inquiries on this schedule may be obtained from farmers living in the vicinity of the unoccupied farm. It would be advisable for the enumerator, before starting the census of his area, to consult the local assessor or a office and obtain a list of all farms which fall under the categories to be enumerated on this schedule, particularly as regards sections 1, 2, 3 and 4. An estimate of acreage of improved land and of the value of the farm may probably be correctly obtained from the occupiers of neighbouring farms.

1. LOCATION OF FARM	
Province.....	Electoral District.....
Municipality.....	(If Improvement District give number)
Township.....	Name of farmer living next to this farm (Write name here)
2. CLASS OF FARM	
Is this a vacant farm, or an abandoned farm? (Write "vacant" or "abandoned" as the case may be)	
3. FARM OWNER, JUNE 1, 1931	
Name.....	
Present address (if known).....	
Birthplace.....	
4. FARM ACREAGE, JUNE 1, 1931	
Total number of acres in this farm.....	acres
Aeres of improved land in this farm (estimated).....	
(Give acreage which has been brought under cultivation and is now fit for the plough)	
5. FARM VALUES, JUNE 1, 1931	
Total value of this farm including buildings \$.....	
(Give the amount for which it is estimated the farm would sell under ordinary conditions)	
Value of all buildings included above \$.....	(Estimated value)
6. FARM FACILITIES, JUNE 1, 1931	
What kind of road adjoins this farm? (Indicate whether asphalt, concrete, macadam, gravel, improved or unimproved dirt road)	
Distance to nearest market town.....	(Miles)
Distance to nearest R. R. Station.....	(Miles)
Principal reasons why farmer has left this farm (To answer this question get information from neighbours)	

## Form 2B

## Values of Field Crops

Province.....Electoral District No.....Subdistrict No.....

To the Enumerator:—

In previous decennial censuses the enumerator was required to obtain from each farm operator the total value of each kind of grain or other field crop produced on his farm in the census year. This inquiry is omitted from the present agriculture schedule and instead the enumerator is required to give on this form an estimate of the average value per unit, whether ton, bushel or pound, of each kind of field crop produced in his enumeration area. These estimates should be based upon personal knowledge and upon inquiries made of prominent farmers, grain dealers, merchants, etc. The price quoted should be that obtained on the average by the farmers in your subdistrict. Please quote prices prevailing at the local markets.

The average price quoted should be such that if it were used as a multiplier for the whole of each crop of your subdistrict, the result so obtained would fairly represent the total value of the particular crop to all of the farmers. Give prices for such crops only as were grown in your subdistrict in 1930.

This schedule of prices is to be enclosed in your portfolio with your other forms and forwarded to your commissioner. **The filling of this form constitutes an important part of your duties and will be required before your account is paid.**

R. H. COATS,  
Dominion Statistician.

Kind of crop	Average value per bushel	Kind of crop	Average value per ton
	\$ cts.		\$ cts.
<b>GRAINS—</b>		<b>HAY AND FORAGE—</b>	
Wheat, fall sown.....		(Under this heading give the value per ton of fodder prepared for winter feeding.)	
Durum wheat, spring sown.....		Timothy.....	
Other wheat, spring sown.....		Timothy and clover.....	
Barley.....		Alfalfa.....	
Oats.....		Millet and Hungarian grass.....	
Rye, fall sown.....		Brome grass.....	
Rye, spring sown.....		Western rye grass.....	
Corn, for husking.....		Prairie hay or natural grass.....	
Flaxseed.....		Corn for ensilage or fodder.....	
Buckwheat.....		Grains cut for hay.....	
Beans.....		Grains cut for summer feeding.....	
Peas.....		Sunflower.....	
Mixed grains.....		Sweet clover.....	
		Other fodder crops.....	
		(Give name)	
<b>GRASS SEEDS—</b>			Average value per lb.
Red clover.....		<b>MISCELLANEOUS FIELD CROPS—</b>	
Alsike clover.....		(Under this heading give average value per lb.)	
Sweet clover.....		Tobacco.....	
Other clover.....		Hops.....	
Alfalfa.....		Flax, for fibre.....	
Timothy.....		Hemp.....	
Brome grass.....		Other crops.....	
Other grass seed.....		(Give name)	
<b>POTATOES AND ROOTS—</b>			
Potatoes.....			
Turnips and swedes.....			
Mangolds and sugar beets, for feed.....			
Carrots, for feed.....			
Sugar beets, for sugar.....			
Other field roots.....			

Examined by.....  
Commissioner.

Signature of enumerator.....

## Form 3

## Animals, Animal Products, Fruits, etc., not on Farms

*This form to be used for reporting agricultural products on plots of less than one acre whether in rural or urban localities.*

Province.....Electoral District.....Subdistrict No.....  
(Write name and number)

in Municipality of.....  
(Insert name and state whether city, town, village or rural municipality.)

Line	Page and line of "Population Schedule" on which owner or occupier is enumerated		Name of occupier, owner, manager or other person in charge	Horses, June 1, 1931 (Include all horses)				Total value all horses
	Page	Line		Colts under 1 year	Colts and fillies 1 year old and under 2 years of age	Mares 2 years old and over	All other horses	
				Number	Number	Number	Number	\$
	1	2	3	4	5	6	7	8

Mules	Cattle, June 1, 1931 (Include all cattle)					Swine	Poultry on hand, June 1, 1931			Bees, June 1, 1931	
	Calves under 1 year	Heifers 1 year old and under 2 years of age	Cows and heifers 2 years old and over, not in milk or in calf	Cows and heifers 2 years old and over, in milk or in calf	All other cattle	Hogs and pigs on hand June 1, 1931	Hens, (old stock) months old and over	Chickens hatched in 1931 and on hand June 1, 1931	Other fowl <i>(Write name)</i>	Hives owned and kept on this plot	Hives owned but kept elsewhere
Number	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number	Number
9	10	11	12	13	14	15	16	17	18	19	20

Animal Products, 1930 (Do not include articles purchased)						Pure-Bred Animals Registered or Eligible for Registration on June 1, 1931 (Included in Columns 4 to 18)					
Cows milked in 1930	Total Milk produced in 1930	Home-made Butter produced in 1930	Eggs produced in 1930	Honey produced in 1930	Wax produced in 1930	Horses		Cattle		Poultry	
						Number	Breed	Number	Breed	Number	Breed
Number	Gallons	Pounds	Dozen	Pounds	Pounds						
21	22	23	24	25	26	27	28	29	30	31	32

Gardens and Hothouses			Fruit Trees in 1931 and Fruit in 1930 (Report all trees under each class whether bearing or not bearing)									
Square feet under glass June 1, 1931	Value of vegetables and vegetable plants produced in 1930	Value of flowers and flowering plants sold in 1930	Apples		Peaches		Pears		Plums		Number	Bushels
			Trees in 1931	Fruit produced in 1930	Trees in 1931	Fruit produced in 1930	Trees in 1931	Fruit produced in 1930	Trees in 1931	Fruit produced in 1930		
Number	\$	\$	Number	Bushels	Number	Bushels	Number	Bushels	Number	Bushels		
33	34	35	36	37	38	39	40	41	42	43		

Cherries				Other Fruit					Grapes and Small Fruits Produced in 1930				
Trees in 1931	Fruit produced in 1930	Trees in 1931	Fruit produced in 1930	Grapes	Strawberries	Raspberries	Currants and gooseberries	Other small fruit (state kind)	Line	Number	Bushels	Number	Bushels
Number	Bushels	Number	Bushels	Pounds	Boxes	Boxes	Quarts	Quarts					
44	45	46	47	48	49	50	51	52					

## Form 10

## Census of Merchandising and Service Establishments

Province.....Census District.....Subdistrict.....  
 (Write name) (Write name) (Number)

## INSTRUCTIONS TO ENUMERATORS

**PURPOSE.**—The purpose of this census is to obtain comprehensive information regarding the distribution of commodities to the consumer. Statistics of production have helped to solve many of the problems of production thus rendering it more efficient. We have very little information of an exact nature about wholesale and retail distribution, yet some of the most important business problems of the day are concerned with this field of activity by which goods reach the ultimate consumer from the manufacturer and producer. It is believed that this Census of Merchandising and Service Establishments by furnishing a complete picture of how distribution is carried on and how services are rendered will yield information which, when analysed, should help materially in the solution of current problems of wholesale and retail trade. It should lead to improvements which will be of benefit to merchants, manufacturers, farmers and consumers.

**DUTY OF ENUMERATOR.**—Your duty in connection with the Census of Merchandising and Service Establishments is to record the name, address, and certain particulars describing the kind of business of EVERY MERCHANDISING AND SERVICE ESTABLISHMENT in your territory, including hotels. You must obtain this information from all retailers, all wholesalers and all other classes of distribution agencies, including all repair and service establishments. The information you obtain will be used as the basis for a postal census. It is absolutely necessary that you make complete and accurate returns. Incomplete and incorrect returns will not be paid for. Commissioners have been instructed not to accept schedules which have been filled in incompletely or inaccurately.

**DEFINITION OF MERCHANDISING AND SERVICE ESTABLISHMENTS.**—For the purpose of the census a **MERCHANDISING ESTABLISHMENT** is one which sells merchandise (as for example, groceries, hardware, dry goods, etc.) at wholesale or retail prices. A **SERVICE ESTABLISHMENT** is one which performs services for the public such as those performed by barbers, tailors, beauty parlors, shoe shine parlors, dyers and cleaners, theatres, slaughter houses, all kinds of automobile repairs, etc., etc.

## RETAIL ESTABLISHMENTS

Under this description you must include in addition to establishments generally known as stores, shops or counters in hotels, gasoline filling stations, automobile repair and service shops, slaughtering establishments, restaurants, retail lumber yards, retail florist shops, refreshment stands, co-operative associations, and other establishments which are not usually designated as stores but which sell commodities at retail. Market stalls and roadside markets or stalls are to be included when of a permanent nature. Owners of stalls selling produce raised on their own farms are not to be included.

1. **Shops or Counters in Hotels Defined.**—Shops or counters in hotels operated as concessions, that is, not operated by the hotel itself, must be included as retail stores and the name and address of each proprietor entered in the schedule.

2. **Gasoline Filling Stations Defined.**—An establishment should be reported as a gasoline filling station only when its main business is the sale of oil and gasoline.

3. **Automobile Repair and Service Establishments Defined.**—These include all kinds of establishments which repair motor cars, sell spare parts and accessories, and supply service of any kind connected with motors such as battery service, brake testing, electrical service, tire repairs, radiator repairs, storage garage, etc. The name and address of automobile repair and service establishments of all kinds must be obtained.

4. **Slaughtering Establishments Defined.**—Large slaughtering establishments such as abattoirs and packing houses are considered as manufacturing establishments and should not be included in your lists. There are many small slaughter houses, however, which carry on business in a retail way. The names and addresses of all such should be recorded.

5. **Restaurants Defined.**—All restaurants, cafés, lunch counters, cafeterias, etc., are to be listed. Dining-rooms and other meal rooms located in hotels and operated by the hotel should not be listed apart from the hotel, but restaurants, etc., in hotels operated by other than the hotel management, are to be listed. Do not list boarding-houses, clubs, lunch rooms in schools or factories for pupils or employees, dining cars on trains or dining-rooms on boats.

**MANUFACTURING ESTABLISHMENTS.**—All establishments whose function is only producing or manufacturing such as mines, factories, farms, fisheries, etc., ARE NOT to be reported; but establishments such as bakers and confectioners, milliners, custom and merchant tailors, which are merchandising stores, but which make on their own premises the goods they sell, ARE to be included.

## WHOLESALE ESTABLISHMENTS

In addition to those establishments regularly known as wholesale houses there are others which also conduct business at wholesale but which are known by special names, such as merchandise brokers, jobbers, sales agents, manufacturers' agents, commission agents, auction companies, manufacturers' sales branches, co-operative associations, chain store warehouses, export merchants, export commission houses, importers, supply houses and equipment dealers. These and all other types of firms which distribute merchandise at wholesale ARE TO BE INCLUDED in your canvass, even though their place of business is only an office in which no goods are actually handled. Descriptions of some types of wholesale distributing establishments to be included follow:—

1. **Co-operative Buying and Selling Organizations.**—Some of these associations exist to sell for their own members; some are purely for the purpose of buying for their members and some perform both functions. Obtain the names and addresses of all kinds.

2. *Wholesalers and Jobbers.*—These are types of business in which goods are bought outright by the firm and title taken to them. As a result, they also sell the goods on their own account as principals and not in the capacity of agents as legally determined. You should therefore include in your list as wholesalers or jobbers only those who buy goods outright, warehouse them, sell them on their own account at wholesale, make deliveries at least to local customers, extend credit, etc.

3. *Cash-and-Carry Wholesalers.*—These firms also buy and sell on their own account, but do not give their customers as much service as the regular wholesaler. They require immediate payment in cash and do not deliver. Their customers have to take the goods away in their own vehicle and pay cash.

4. *Drop Shippers or Desk Jobbers.*—These buy and sell on their own account but they have no warehouses of their own and do not actually handle goods. They usually obtain orders from retailers and send them to manufacturers to be filled directly. In this class list only those who specialize in this type of business.

5. *Wagon Distributors.*—These buy and sell on their own account, have warehouses, and may extend credit. They differ from regular wholesalers in that they have no separate sales force. They are sometimes known as wholesale peddlers, combining as they do, sales and deliveries. The salesman driver calls on regular customers and delivers the goods immediately they are sold. He should be included in your report.

6. *Chain Store Warehouses.*—These are similar to regular wholesale establishments except that they are the wholesale distributing stations of chain stores.

7. *Commission Merchants.*—These may be individuals, partnerships, corporations, or co-operative associations. Goods sold on commission are not bought by the commission merchant. They are handled but are sold on a commission basis. Many commission merchants do regular wholesale business as well as a commission business, that is, they buy some of the goods on their own account as wholesalers and jobbers do. IN SUCH CASES LIST THE FIRM AS COMMISSION MERCHANT AND WHOLESALER.

8. *Grain Elevators.*—All grain elevators, whether independent or co-operative, which engage in buying and selling, that is, which are merchant elevators, must be listed. Grain elevators whose purpose is only to store grain and not to buy and sell it should not be included.

9. *Auction Companies.*—These are firms which sell by the auction method at wholesale. They do not buy and sell on their own account but handle goods for others. They sell merchandise in large quantities at a public sale to the highest bidder in accordance with certain rules and regulations. Auction companies receive the goods to be sold from producers, country buyers or shippers, co-operatives, etc.

10. *Brokers.*—Such establishments do not take title to nor actually handle the goods they buy or sell. They buy or sell for others and differ from commission merchants in that they do not actually handle goods in their place of business. Commission merchants represent sellers who send their goods to them to be sold, whereas brokers may represent either buyers or sellers. The broker's place of business may often consist of only an office.

11. *Selling Agents.*—These operate on a commission basis and consequently do not take title to the goods they sell for others. They operate independently, that is, are in business for themselves and get their income from commissions on sales. They usually represent one or more manufacturers and handle the entire output of the firms who employ them. They differ from brokers in that their relations with manufacturers are continuous and usually involve sales of the manufacturer's total output. They often help their clients financially.

12. *Manufacturers' Agents.*—These also, like selling agents, operate independently. They are in business for themselves on a commission basis but differ from selling agents chiefly as follows:—

1. They do not handle the entire output of the manufacturer or mill which they represent. 2. They are limited as to the territory in which they may operate while selling agents may sell everywhere.

3. Contracts place limits upon their authority in regard to prices, terms, etc. 4. They do not help to finance their clients. Relations of both manufacturers' agents and selling agents with manufacturers are continuous but those between manufacturers and brokers are more casual. The broker is more of a free lance.

13. *Manufacturers' Sales Branches.*—These are branches operated by manufacturing corporations for the purpose of selling the goods which they manufacture. The chief differences between manufacturers' sales branches and manufacturers' agents and selling agents are: sales branches are operated by the manufacturers themselves and are therefore not independent enterprises, whereas manufacturers' agents and selling agents are in business for themselves and represent the manufacturers under contract. A manufacturing agent represents two or more manufacturers.

14. *Supply Houses and Equipment Dealers.*—These are establishments which sell goods to large consumers in wholesale quantities and at wholesale prices. They include oil-well supply companies, mine and mill supply companies, machinery dealers, and a large variety of supply houses for bakers' supplies, barbers' supplies, etc.

15. *Importers.*—Importers are wholesalers or jobbers who deal in goods bought in other countries. They buy and sell on their own account.

16. *Export Merchants.*—These buy goods on their own account for export to other countries. They are wholesalers similar to importers but deal in domestic goods bought for resale in other lands.

17. *Export Commission Houses.*—These are wholesale agencies which specialize in the handling of goods for export on a commission basis. They are in business for themselves, carrying on export business for clients who may be manufacturers or wholesale middlemen, and receive a commission on their sales. When acting purely as export commission houses they do not buy the goods outright but handle them, instead, as representatives. Sometimes export commission houses purchase some goods outright, and they are to that extent both export commission houses and export merchants. IN SUCH CASES LIST THE FIRM AS EXPORT COMMISSION HOUSE AND EXPORT MERCHANT.

#### SERVICE ESTABLISHMENTS

Service Establishments which must be reported include the following:—

1. Personal service establishments such as barber shops, beauty parlors, shoe shine parlors.
2. Commodity repair service establishments such as automobile repair, blacksmithing, bicycle and motorcycle repair, boot and shoe repair, furniture repair, jewelry and watch repair, radio repair, upholstery repair, electrical repair.
3. Entertainment and educational service establishments such as bowling alleys, pool and billiard rooms, theatres, circulating libraries (commercial).
4. Other service establishments such as cartage and storage, dyeing, cleaning and valet service, fur storage, hemstitching and embroidery, laundry, locksmith shop, restaurant, messenger, photography, storage garage, taxi, etc.

DO NOT REPORT on the following:—

1. *Professional Services*, such as doctors, dentists, chiropractors, surgeons, artists, lawyers, etc.
2. *Trade Services*, such as building trades, carpentry, masonry, tin-smithing, plumbing, etc.
3. *Public Services*, such as electric light, telephone, gas, steam, electric railroad, etc. Stores run by such public utilities, selling commodities (such as electrical equipment) at retail must be reported.
4. Real estate brokers and dealers, stock brokers, and bond houses.

## ADDITIONAL INSTRUCTIONS FOR FILLING IN SCHEDULE

1. Both firm name and owner's name should be obtained for all stores. In cases where firm name and owner's name are the same enter it in your schedule twice.

2. *Business*—

*A. Nature of Trading.*—This question is for the purpose of finding out the manner in which the firm does business, i.e., whether as a retailer, wholesaler, jobbing firm, etc. The varieties of trading mentioned above are samples of those which you will encounter. Obtain from each firm the exact description of the kind of trading activity in which it is engaged and write it in the schedule.

*B. Nature of Commodities Handled or Services Rendered.*—There are a very large number of different kinds of firms when looked at from the point of view of commodities handled. The lists on the back page of the schedule contain suggestions of the kinds of establishments you are to record. They are not complete. Remember that you must enter in your schedule ALL MERCHANDISING AND SERVICE ESTABLISHMENTS SELLING AT RETAIL OR WHOLESALE PRICES except those which these instructions definitely state you need not report.

3. *Chains.*—Find out if the establishment is a Chain Store. Firms with three or more stores under the same ownership or in the same organization will be considered a chain.

4. *Size of Business.*—Find out if the total yearly sales of the establishment amount to (A) under \$10,000, (B) \$10,000 to \$25,000, (C) \$25,000 to \$50,000, (D) \$50,000 to \$100,000, and (E) over \$100,000.

No.	Firm Name	Name of Owner or Operator	Street Address of Firm	Business	
				A. Nature of Trading (e.g., wholesaler, retailer, wholesaler and retailer, or special type of wholesaler such as jobber, cash-and-carry wholesaler, drop shipper or desk jobber, wagon distributor, chain store warehouse, commission merchant, grain elevator, auction company, broker, selling agent, manufacturer's agent, manufacturer's sales branch, supply houses and equipment dealers, importers, export merchant, export commission house, co-operative buying and selling organization).	B. Nature of Commodities handled or services rendered (e.g., hardware, groceries, general store, departmental store, chain shoe store, gasoline service station, automobile service station, shoe shine parlor, beauty parlor, barber shop, etc.) (Do not include professional services, as for example, dentist, doctor, lawyer, chiropractor, etc.)
				(Write here the name of the kind of trading done)	(Write here the name of kind of commodities handled or services rendered)

Chains	Size of Business	Not to be Filled in by Enumerator		
Is this a Chain Store?	Do the total sales of this firm amount to (A) under \$10,000, (B) \$10,000 to \$25,000, (C) \$25,000 to \$50,000, (D) \$50,000 to \$100,000, (E) over \$100,000?	Schedule	Schedule Number	Remarks
Write here Yes or No	Write here A, B, C, D, or E			

The following lists contain suggestions as to the kind of establishments you are to record. They are not complete. Remember that you must enter in your schedules all merchandising and service establishments selling at retail or wholesale prices except those which these instructions definitely say you need not report.

## LIST OF ESTABLISHMENTS ACCORDING TO COMMODITIES HANDLED

## RETAIL ESTABLISHMENTS

<p>Agricultural implements and machinery.</p> <p>Antiques.</p> <p>Art goods.</p> <p>Auctioneers.</p> <p>Automobiles and accessories.</p> <p>Automobile accessories.</p> <p>Automobile tires, tubes and tire sundries.</p> <p>Awnings, flags, window-shades and tents.</p> <p>Bakery and confectioneries.</p> <p>Bath tubs and fittings.</p> <p>Batteries.</p> <p>Bicycles and sporting goods.</p> <p>Blank book and accounting forms.</p> <p>Boats and canoes.</p> <p>Books.</p> <p>Boots and shoes.</p> <p>Building materials.</p> <p>Butchers and meat markets.</p> <p>Butter, cheese and eggs.</p> <p>Cafés.</p> <p>Cameras and photographic supplies.</p> <p>Carriage and wagon dealers.</p> <p>Caterers.</p> <p>Children's specialty shops.</p> <p>Cigars and tobacco.</p> <p>Clothing.</p> <p>Coal, wood and other fuels.</p> <p>Coffins, caskets and undertakers' supplies.</p> <p>Confectioners.</p> <p>Corset dealers and lingerie.</p> <p>Dairies and dairy produce.</p> <p>Department stores.</p> <p>Delicatessen and ready-to-serve foods.</p> <p>Disinfectant and insecticide.</p> <p>Drapery, upholstery and house furnishings.</p> <p>Drugs.</p> <p>Dry goods.</p> <p>Electrical appliances and equipment.</p> <p>Fancy goods.</p> <p>Farm and garden machinery.</p> <p>Fertilizers.</p> <p>Fish and other sea foods.</p>	<p>Five-and-ten-cent to one dollar and variety stores.</p> <p>Florists.</p> <p>Flour and feed.</p> <p>Flowers, wreaths, etc.</p> <p>Fruit and vegetables.</p> <p>Fuel oil.</p> <p>Furniture.</p> <p>Furriers.</p> <p>Gas appliances and supplies.</p> <p>Gasoline, lubricating oil and greases.</p> <p>General stores.</p> <p>Gents' furnishings.</p> <p>Gift shops.</p> <p>Glass.</p> <p>Groceries.</p> <p>Groceries and meat markets.</p> <p>Hair goods.</p> <p>Hardware and stoves.</p> <p>Harness and saddlery.</p> <p>Hats and caps.</p> <p>Hay, grain and feed.</p> <p>Heating appliances.</p> <p>Hides and skins.</p> <p>Hosiery.</p> <p>Hospital supplies.</p> <p>House furnishings.</p> <p>Ice.</p> <p>Ice cream and soft drinks.</p> <p>Jewelry, silverware, etc.,</p> <p>Knitted goods.</p> <p>Ladies' tailors.</p> <p>Ladies' wear.</p> <p>Leather goods.</p> <p>Luggage.</p> <p>Lumber and millwork.</p> <p>Machinery dealers.</p> <p>Mail order houses.</p> <p>Mats.</p> <p>Men's and boys' furnishings.</p> <p>Milk and cream.</p> <p>Millinery.</p> <p>Mineral waters.</p> <p>Monuments and tombstones.</p> <p>Motorcycles, bicycles and accessories.</p> <p>Musical instruments and accessories.</p> <p>Newspapers and magazines.</p> <p>Notions.</p>	<p>Office and store equipment, typewriters, etc.</p> <p>Oils and greases.</p> <p>Optical supplies.</p> <p>Opticians and optometrists.</p> <p>Paints, varnishes and window glass.</p> <p>Pet and bird shops.</p> <p>Pianos and musical instruments.</p> <p>Pictures, framing and artists' supplies.</p> <p>Plumbing and sanitary supplies.</p> <p>Poultry and meat.</p> <p>Produce and provision dealers.</p> <p>Professional and scientific instruments and supplies.</p> <p>Radios and radio equipment.</p> <p>Refreshment stands.</p> <p>Refrigerators (electric and gas).</p> <p>Restaurants.</p> <p>Roadside markets or stands.</p> <p>Roofing.</p> <p>Rubber cement.</p> <p>Rugs, carpets and other floor covering.</p> <p>Sand and gravel.</p> <p>Scales and balances.</p> <p>Scientific and professional office equipment.</p> <p>Second-hand merchandising.</p> <p>Sends, bulbs, and nursery stock.</p> <p>Sewing machine dealers.</p> <p>Shoes and other footwear.</p> <p>Silk shops.</p> <p>Souvenirs and novelties.</p> <p>Sporting goods.</p> <p>Stationery, books and magazines.</p> <p>Stationery and gifts, etc.</p> <p>Stoves, ranges, heaters, etc.</p> <p>Surgical supplies.</p> <p>Tailors.</p> <p>Taxidermists.</p> <p>Tobaccoists.</p> <p>Toilet articles and preparations.</p> <p>Toys and games.</p> <p>Trucks, buses and accessories.</p> <p>Typewriter and supplies.</p> <p>Undertakers.</p> <p>Wall paper dealers.</p> <p>Waterproof materials.</p> <p>Women's specialty shops.</p>
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## WHOLESALE ESTABLISHMENTS

<p>Agricultural implements and machinery.</p> <p>Automobiles (passenger).</p> <p>Auto trucks, tractors, and commercial motor vehicles.</p> <p>Automobile accessories.</p> <p>Automobile tires and tubes.</p> <p>Automobile equipment and supplies.</p> <p>Auto ignition.</p> <p>Bakery products.</p> <p>Bakers' equipment and supplies.</p> <p>Barbers' equipment and supplies.</p> <p>Building material (other than lumber and millwork).</p> <p>Cameras and photographic supplies.</p> <p>Carriages and wagons.</p> <p>Cattle dealers.</p> <p>China, glassware, and crockery.</p> <p>Cigars and tobacco.</p> <p>Clothing and furnishings, men's and boys'.</p> <p>Clothing, women's and children's.</p> <p>Coal, wood, and ice.</p> <p>Confectionery, ice cream, and soft drinks.</p> <p>Cooperage.</p> <p>Cotton.</p> <p>Dairy products and eggs.</p> <p>Drugs.</p> <p>Dry goods and notions.</p>	<p>Electrical.</p> <p>Feed.</p> <p>Fertilizers.</p> <p>Fish and other sea foods.</p> <p>Flour and feed.</p> <p>Florists.</p> <p>Fruit.</p> <p>Fruit and vegetables.</p> <p>Fur goods.</p> <p>Furniture (house).</p> <p>Gas appliances and supplies.</p> <p>Gasoline and oil.</p> <p>General merchandise.</p> <p>Grain.</p> <p>Grocery.</p> <p>Hardware.</p> <p>Harness and saddlery.</p> <p>Hats and caps, men's and boys'.</p> <p>Hay, grain, and feed.</p> <p>Hides and skins.</p> <p>Household supplies.</p> <p>Iron and steel.</p> <p>Jewelry and silverware.</p> <p>Junk.</p> <p>Leather.</p> <p>Live stock.</p> <p>Luggage and leather goods (other than boots and shoes).</p> <p>Lumber and millwork.</p> <p>Machinery and industrial equipment.</p>	<p>Meats.</p> <p>Millinery.</p> <p>Mine and mill supplies.</p> <p>Motorcycles, bicycles, and supplies.</p> <p>Musical instruments and supplies (other than radio).</p> <p>Office and store equipment and supplies.</p> <p>Oil-well supplies.</p> <p>Optical goods.</p> <p>Paint, varnish, glass, and supplies.</p> <p>Paper and paper goods.</p> <p>Plumbing and heating.</p> <p>Poultry and eggs.</p> <p>Radio and radio accessories.</p> <p>Refrigerators (gas and electric).</p> <p>Roofing.</p> <p>Rubber goods (other than tires and tubes).</p> <p>Scientific apparatus.</p> <p>Shoes.</p> <p>Sporting goods.</p> <p>Stationery, books and magazines.</p> <p>Stoves and ranges.</p> <p>Tobacco (leaf).</p> <p>Typewriter and supplies.</p> <p>Vegetables.</p> <p>Wool (raw).</p> <p>Second-hand merchandise.</p> <p>Miscellaneous.</p>
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## LIST OF ESTABLISHMENTS ACCORDING TO COMMODITIES HANDLED—Con.

## SERVICE ESTABLISHMENTS

Amusements (dancing places, games, etc.)	Dyeing, cleaning and valet service.	Pawn shops.
Automobile repair service.	Electrical repair service.	Photography.
Barber shops.	Fur storage.	Pool and billiard rooms.
Beauty parlors.	Furniture repair shops.	Radio repair service.
Bicycle and motorcycle repair shops.	Hairdressers.	Shoe repair shops.
Blacksmith shops.	Hemstitching and embroidery.	Shoe shine parlors.
Boats and canoes (for hire).	Laundry.	Slaughter houses.
Boot and shoe repair.	Locksmith shops.	Storage garages.
Bowling alleys.	Meals served in restaurant, dining-room, lunch counter, etc.	Taxi service.
Cartage and storage.	Messenger service.	Theatre.
Circulating libraries (commercial).	Moving pictures.	Upholstery—repair shops.

## Examination of Census Enumerators in Cities, Towns and Incorporated Villages

## INSTRUCTIONS

*To Commissioners:* When the candidates are assembled and have received their final instructions, you will hand to each a copy of each schedule and the present paper. They will then be required to fill in the schedules, cards and forms from the narrative.

*One hour is allowed for completing the paper*

This paper may be retained by the candidate, but his schedules when filled in must be forwarded by yourself to this office as per instructions previously given.

The candidate should be instructed to fill out the schedules in ink, from the narrative, without conversation or communication with any one after the work test has begun. He may be allowed, however, to consult the Book of Instructions.

## NARRATIVE

Mr. William Jones, enumerator for area No. 15, in the District of Regina, Saskatchewan, began his enumeration on June 1, 1931, with the house of John Smith, living at 36 Linden Street, South Ward, Regina.

John Smith, the head of the house, is a married man. His wife's name is Harriet. He lives in a brick-veneer semi-detached house, containing 9 rooms for which he pays \$45 per month rental. He has a radio. There are 3 sons, George, James and John, all unmarried. John is at college. The father was 52 years of age his last birthday, the mother 50, George 28, James 26, and John 20. There are also 2 daughters, Eliza and Mary, aged respectively 24 and 18. The head of the house was born in the United States of Irish parents, who were British subjects, came to Canada in 1894 and is a Canadian citizen. His father was born in Ireland and his mother in England. The wife was born in France of English parents and came to Canada in 1896. Her father was born in India and her mother in Jersey Island. The father speaks English only; the mother and children speak English and French. All the members of the family are Anglicans. The parents and children can read and write. John attended college 8 months since the first of September, 1930. The father is a carpenter on wages, receiving \$35 per week when working, but had lost 7 weeks during the last 12 months. Of the weeks lost 3 were due to illness and 4 to lack of work. He was not at work on June 1, 1931 on account of temporary lay-off. The eldest son is a medical doctor in general practice; James is a civil engineer and works on his own account. The eldest daughter is employed as book-keeper in a grocery store at a salary of \$60 per month; she was ill 2 weeks during the last 12 months but was at work on June 1, 1931. Alfred Brown, a roomer with this family, is absent at the time of visit. "Individual Form—Population" is left with the family to be filled in by Mr. Brown. The enumerator returns for this form at the time stated and learns from it that Mr. Brown was born in Ontario of English parents (his father and mother were also born in Ontario), is divorced, 36 years of age, speaks English, is a member of the Presbyterian Church, can read and write, is a brass polisher and employed in a furniture factory at a wage of \$180 per month. He was at work every day during the last 12 months also on June 1, 1931.

Mr. Smith owns 1 gelding five years old, 1 pure-bred Jersey cow, 50 pure-bred white Plymouth Rock hens over four months old; he raised 35 chickens in 1931 and has the same number on hand June 1. In 1930 his cow gave him 500 gallons of milk, he made 60 pounds of butter, and his hens gave him 400 dozens of eggs.

On June 1 he had 10 hives of bees which he kept on his plot and which produced him last year 300 pounds of honey and 40 pounds of wax.

He had also a hothouse 15 feet wide by 20 feet long. In 1930 from his garden and hothouse he obtained \$121 worth of vegetables and sold flowers and flowering plants to the value of \$115.

In the year 1930 there were on his plot 2 apple trees, 1 plum tree, and 3 cherry trees, which produced respectively 4 bushels of apples, 1 bushel of plums and 16 quarts of cherries.

He had about one-twentieth of an acre in strawberries, which yielded 500 quarts; 25 quarts of currants and 25 quarts of gooseberries were also grown on the plot.

## Examination of Census Enumerators in Rural Sections

## INSTRUCTIONS

*To Commissioners:* When the candidates are assembled and have received their final instructions, you will hand to each a copy of each schedule and the present paper. They will then be required to fill in the schedules from the description given below.

*One hour is allowed for completing the paper*

The paper may be retained by the candidate, but his examination schedules when filled in must be forwarded by yourself to this office as per instructions previously given.

The candidates should be instructed to fill out the schedules, in ink, from the narrative, without conversation or communication with anyone after the work on the test has begun. They may be allowed, however, to consult the Book of Instructions.

## NARRATIVE

Mr. William Jones, enumerator for area No. 15, in the District of Carleton, Province of Ontario, began his enumeration on June 1, 1931, with the farm of John Smith, whose post office address is Richmond. He lives in the township of Goulburn, in the rural municipality of Goulburn.

John Smith, the head of the house, is a married man. His home is a single brick-veneer house containing 8 rooms. His wife's name is Harriet. There are 3 sons, George, James and John, all unmarried and John is at college. The father was 52 years of age his last birthday, the mother 50, George 28, James 26 and John 20. There are also 2 daughters, Eliza and Mary, aged respectively 24 and 18. The head of the house was born in the United States of Irish parents, who were British subjects, came to Canada in 1894 and is a Canadian citizen. His father was born in Ireland and his mother in Scotland. The wife was born in France of English parents and came to Canada in 1896. Her father was born in India and her mother in Jersey Island. The father speaks English only, the mother and children speak English and French. All the members of the family are Anglicans. The parents and children can read and write. John attended college 8 months since the first of September, 1930. The father has been a farmer 30 years and owner of this farm 22 years and 6 months. The eldest son is also a farmer and works on his father's farm. For years he lived in the city but came back 6 months ago to live permanently on the farm. James is a carpenter and works on his own account. The eldest daughter is employed as book-keeper in a grocery store at a salary of \$60 per month, she was ill 2 weeks during the last 12 months. She was not at work on Monday, June 1, 1931, due to a fire which destroyed part of the store.

Mr. Smith owns 200 acres of land valued at \$6,000, including buildings worth \$1,200. In addition he rents at \$125 per year, 20 acres valued at \$300. There is a \$3,000 mortgage on the 200 acres owned by Mr. Smith on which he paid \$180 interest in 1930.

During the year 1930 Mr. Smith bought the following supplies through a farmers' co-operative organization: mill feed \$300; hay \$50 and seeds \$90.

Of the 200 acres owned by Mr. Smith 140 have been brought under cultivation, 20 are unbroken land, 20 are in woodlands and 20 consist of marsh or waste land so rough as to be unfit for cultivation. There are 5,000 planted forest trees growing on this farm. The rented land is all improved. About \$2,500 is invested in an automobile, a binder, an electric motor, wagons, ploughs, harness, tools, sleds, etc. During the whole of the year 1930 a male farm hand was employed who received \$30 per month in cash and his board, and \$90 was paid for 9 weeks extra labour during the harvest season. The estimated value of board furnished for farm labour was \$215. There is a telephone in the house, all the buildings are equipped with electricity and there is running water in the kitchen.

Of the improved land in 1930, 20 acres were under pasture, 6 acres summer fallow; 50 acres were sown in spring wheat and yielded 30 bushels per acre excepting 5 acres destroyed by hail; 20 acres of fall sown wheat were harvested which yielded 35 bushels to the acre; 10 acres of barley yielded 20 bushels to the acre; 20 acres of oats yielded 50 bushels to the acre; 5 acres of flax yielded 15 bushels to the acre; 3 acres of mixed grains yielded 45 bushels to the acre; 2 acres of potatoes yielded 120 bushels to the acre; 1 acre of turnips yielded 300 bushels;  $\frac{1}{2}$  acre in farm garden on which a crop valued at \$150 was raised and 20 acres under timothy and clover which yielded  $1\frac{1}{2}$  tons per acre.

For the harvest year of 1931, Mr. Smith had 15 acres in fall wheat, 55 acres in spring wheat, 10 acres in barley, 20 acres in oats, 5 acres in flax, 4 acres in mixed grains, 2 acres in potatoes, and  $1\frac{1}{2}$  acres in turnips, 20 acres under timothy and clover; 20 acres under pasture and 5 acres summer fallow.

There were no fruits or fruit trees on this farm. During the winter of 1930 John Smith cut 20 cords of hard firewood for his own use and sold 15 cords valued at \$10 per cord.

The following domestic animals were on this farm on June 1, 1931: 3 two-year old geldings worth \$100 each; 2 pure-bred Clydesdale mares three years old worth \$150 each; 4 mules worth \$125 each; 2 foals, 1 male and 1 female, worth \$80 each; 3 pure-bred Jersey milch cows worth \$90 each; 4 calves under one year worth \$25 each; a registered Jersey bull, worth \$600; 40 ewes worth \$5 each; 20 lambs worth \$3.25 each; 20 of the ewes and 10 of the lambs are pure-bred Shropshires, the 20 ewes were bought in 1930. 1 pure-bred Berkshire boar, worth \$30; 10 sows valued at \$25 each; 150 hens and chickens over 4 months old worth \$1 each, half of which are pure-bred white Leghorns; 200 pure-bred white Leghorn chickens were hatched in 1931 worth 60 cents each.

Last year from 3 cows, 9,650 pounds of milk were produced on the farm of which 3,500 pounds were sold at \$2 per 100 pounds. There was also produced in 1930, 110 pounds of butter worth 50 cents per pound all consumed on the farm; 60 pounds of cheese worth 25 cents per pound; 900 dozens of eggs of which 750 dozens were marketed at 40 cents per dozen; 200 chickens were raised on this farm in 1930.

In 1930, 50 sheep were sheared. The average weight of the fleeces was 5 pounds and brought 25 cents per pound.

During the year 1930 the farmer sold alive: 50 hens \$75; 10 sheep \$100; 20 pigs \$400 and one colt \$125. A steer valued at \$40, a sheep at \$5, 2 pigs at \$15 each, 4 ducks at \$0 cents per pair and 3 geese at \$1 each were slaughtered and used on the farm.

Everything sold on this farm except the milk was through a farmers' co-operative organization

## APPENDIX III

ALLOWANCES PAID TO CENSUS ENUMERATORS AND COMMISSIONERS—  
SEVENTH CENSUS OF CANADA, 1931

*Enumerators' Allowances.*—Enumerators will be entitled to the following allowances:—

(1) **POPULATION.**—For every living person recorded in the population schedule (Form No. 1) and for every "Closed House" (Form No. 5) and "Absentee Family" (Form No. 6) card forwarded to the Dominion Bureau of Statistics, each enumerator will be paid an allowance of five cents.

(2) **AGRICULTURE.**—For every farm of five acres and over recorded in the agricultural schedule (Form No. 2) and for every report of vacant farms and abandoned farms (Form 2a) thirty-five (35) cents: for areas of from one to five acres, provided a record is made of products with a value of not less than \$50 in the census year, twenty-five (25) cents.

(3) **LIVE STOCK, ETC., IN TOWNS.**—For every record of "live stock and animal products in towns and cities" entered on schedule No. 3, ten (10) cents.

(4) **MERCHANDISING AND SERVICE ESTABLISHMENTS.**—For every record of "merchandising and service establishments" entered on Form No. 10, ten (10) cents.

(5) **BLIND AND DEAF.**—For every record of blind and deaf persons (Form No. 7), five (5) cents.

(6) **ALLOWANCES FOR EXPENSES.**—In localities outside of cities, towns and incorporated villages, enumerators will be paid in lieu of horse and motor hire and all other expenses and in addition to the rates provided above, viz.: (1) In Ontario, Quebec and the Maritime Provinces \$5.00 per hundred names of persons enumerated in population schedule Form No. 1. (2) In Manitoba, Saskatchewan and Alberta \$7.00 per one hundred names of persons enumerated in population schedule (Form No. 1) provided however that the minimum allowance under this section for any township in which a *bona fide* resident population is found shall be \$7.50. (3) In British Columbia an allowance of \$15.00 per one hundred names of persons enumerated in the population schedule (Form No. 1). But these allowances will not apply to subdistricts or regions provided for in the Instruction following.

(7) **SPECIAL CASES.**—In census subdistricts or regions of sparse population, remote from settlement and deficient in means of communication, the rates and allowances to enumerators shall be such as the Dominion Statistician with the approval of the Minister, may direct; and the same rule shall apply also in subdistricts or regions where the services of an interpreter, a guide or other assistant to an enumerator may be required. But in no case shall an interpreter or guide or other assistant to an enumerator be employed, except within the written authority of the Dominion Statistician.

(8) **TRAVELLING EXPENSES FOR ENUMERATORS.**—Census enumerators called to receive instructions from commissioners before commencing enumeration work will be entitled when on such duty to reasonable expenses of travel by railroad or other conveyance and to cost of living at hotels or other places from time of leaving home to return thereto, as are approved by the Dominion Statistician and to an allowance of three dollars per day for time spent in receiving instructions as certified by the commissioner.

*Commissioners' Allowances.*—The commissioner of each census district will be entitled to payment at a rate of one cent per name for each person enumerated in the population schedules; three cents for every record on Form No. 2, of farms of one acre and over provided entry is made of products with a value of not less than \$50 in the census year; one cent for every record made on Form No. 3; one cent for every record made on either Form No. 7 or Form No. 10. For correspondence with Departmental and staff officers, personal studies, instruction of enumerators, examination and correction of enumerators' reports and accounts, making out returns for transmission to the Minister of Trade and Commerce according to the Book of Instructions, he will be entitled to a special allowance mentioned at the time of his appointment as set out below.

Commissioners also will be allowed reasonable travelling and living expenses while receiving instructions from an officer of the Bureau, and they will also be entitled to transportation expenses while instructing enumerators, as approved by the Dominion Statistician.

Commissioners will be allotted office space in Dominion Government buildings, where this is possible. When offices in public buildings are not available they will be allowed a stated amount for rent of office upon the approval of the Dominion Statistician and also when approved an allowance for rent of halls for instructing enumerators will be made.

## SPECIAL ALLOWANCES TO CENSUS COMMISSIONERS

District No.	PRINCE EDWARD ISLAND	District No.	NOVA SCOTIA—Con.	District No.	NEW BRUNSWICK—Con.
1	Kings.....	12	Inverness.....	24	Victoria-Carleton.....
2	Prince.....	13	Pictou.....	25	Westmorland.....
3	Queens.....	14	Queens-Lunenburg.....	26	York-Sunbury.....
		15	Richmond-West Cape Breton.....		QUEBEC
	NOVA SCOTIA	16	Shelburne-Yarmouth.....	27	Argenteuil.....
4	Antigonish-Guysborough.....		NEW BRUNSWICK	28	Bugot.....
5	Cape Breton North-Victoria.....	17	Charlotte.....	29	Boisbelle.....
6	Cape Breton South.....	18	Gloucester.....	30	Beauharnois.....
7	Colchester.....	19	Kent.....	31	Bellechasse.....
8	Cumberland.....	20	Northumberland.....	32	Berthier-Maskinonge.....
9	Digby-Annapolis.....	21	Restigouche-Madawaska (2).....	33	Bonaventure.....
10	Halifax City and County.....	22	Royal.....	34	Brome-Missisquoi.....
11	Hants-Kings.....	23	St. John-Albert (2).....	35	Chamby-Verchères.....
				36	Champlain.....
				37	Charlevoix-Saguenay (2).....
					600 00
					600 00

## SPECIAL ALLOWANCES TO CENSUS COMMISSIONERS—Continued

District No.	QUEBEC—Con.	District No.	ONTARIO—Con.	District No.	MANITOBA				
38	Chateauguay-Huntingdon.....	325	09	Dufferin-Simcoe.....	400	174	Brandon.....	250	00
39	Chicoutimi.....	750	100	Durham.....	225	175	Dauphin.....	400	00
40	Compton.....	350	101	Elgin West.....	225	176	Lindsay.....	200	00
			102	Essex East.....	225	177	Macdonald.....	250	00
41	Dorchester.....	250	103	Essex South.....	225	178	Marquette.....	275	00
42	Drummond-Arthabaska.....	300	104	Essex West.....	225	179	Neepawa.....	275	00
43	Gaspé (3).....	350	105	Fort William.....	600	180	Nelson.....	400	00
			106	Frontenac-Addington.....	375	181	Portage la Prairie.....	400	00
			107	Glengarry.....	225	182	Provencher.....	325	00
44	Hull.....	400	108	Gravelly-Bundas.....	350	183	Selkirk.....	400	00
45	Joliette.....	300	109	Grey North.....	250	184	Souris.....	280	00
46	Kamouraska.....	250	110	Grey South.....	250	185	Springfield.....	500	00
47	Labelle (2).....	350	111	Halimand.....	225	186	St. Boniface.....	250	00
			112	Halton.....	225	187	Winnipeg North.....	250	00
48	Lac-St-Jean.....	700	113	Hamilton East.....	175	188	Winnipeg North Centre.....	250	00
49	Laprairie-Napierville.....	250	114	Hamilton West.....	175	189	Winnipeg South.....	250	00
50	L'Assomption-Montcalm.....	400	115	Hastings-Peterborough.....	350		Winnipeg South Centre.....	250	00
			116	Hastings South.....	250				
51	Laval-Deux-Montagnes.....	225	117	Huron North.....	225				
52	L'Inlet.....	250	118	Huron South.....	225	190	Assiniboia.....	250	00
53	Lotbinière.....	275	119	Kanora-Rainy River (2).....	450	191	Humboldt.....	250	00
54	Matane.....	400	120	Kent.....	250	192	Kinrossville.....	300	00
55	Mégantic.....	300	121	Kingston City.....	175	193	Lethbridge.....	250	00
56	Montmagny.....	250	122	Lambton East.....	225	194	Long Lake.....	250	00
57	Nicolet.....	275	123	Lambton West.....	225	195	McKenzie.....	250	00
58	Pontiac (3).....	400	124	Lanark.....	325	196	Maple Creek.....	400	00
			125	Leeds.....	225	197	Melfort.....	600	00
			126	Lincoln.....	225	198	Melville.....	250	00
60	Portneuf.....	300	127	London.....	175	199	Moose Jaw.....	250	00
61	Quebec-Montmorency.....	700	128	Middlesex East.....	225	200	North Battleford.....	600	00
62	Quebec East.....	175	129	Middlesex West.....	225	201	Prince Albert.....	500	00
63	Quebec South.....	175	130	Muskoka-Ontario.....	500	202	Qu'Appelle.....	275	00
64	Quebec West.....	200	131	Nipissing.....	800	203	Regina.....	200	00
65	Richelieu.....	225	132	Norfolk-Elgin.....	300	204	Rosetown.....	250	00
66	Richmond-Wolfe.....	325	133	Northumberland.....	250	205	Saskatoon.....	200	00
67	Rimouski.....	400	134	Ontario.....	225	206	South Battleford.....	400	00
68	St-Hyacinthe-Rouville.....	350	135	Ottawa.....	175	207	Swift Current.....	250	00
69	St-Johns-Iberville.....	250	136	Oxford North.....	225	208	Weyburn.....	250	00
70	St-Johns-Longueville.....	225	137	Oxford South.....	225	209	Willow Bunch.....	250	00
71	Sharbrooke.....	225	138	Parkdale.....	250		Yorkton.....	250	00
72	Stanstead.....	225	139	Parry Sound.....	500				
73	Témiscouata.....	250	140	Peel.....	225	211	Aerodin.....	400	00
74	Terrebonne.....	225	141	Perth North.....	225	212	Athabasca.....	700	00
75	Trois-Rivières-St-Maurice.....	350	142	Perth South.....	225	213	Battle River.....	300	00
			143	Peterborough West.....	225	214	Bow River.....	300	00
76	Vaudreuil-Soulanges.....	250	144	Port Arthur-Thunder Bay (2).....	100	215	Calgary East.....	200	00
77	Yamaska.....	225			800	216	Calgary West.....	300	00
			145	Prescott.....	250	217	Camrose.....	2	
			146	Prince Edward-Lennox.....	275	218	Edmonton East.....	175	00
			147	Renfrew North.....	250	219	Edmonton West.....	250	00
70	Cartier.....	250	148	Renfrew South.....	250	220	Lethbridge.....	400	00
80	Hochelega.....	250	149	Russell.....	250	221	Macleod.....	400	00
81	Jacques Cartier (2).....	225	150	Simcoe East.....	225	222	Medicine Hat.....	400	00
			151	Simcoe North.....	225	223	Peace River (2).....	600	00
82	Laurier-Outremont.....	250	152	Stormont.....	250	224	Red Deer.....	600	00
83	Maisonneuve.....	250	153	Thornhill.....	700	225	Vergoville.....	275	00
84	Mount Royal.....	250	154	Thornhill South.....	700	226	Wetaskiwin.....	450	00
85	St-Anne.....	250	155	Toronto East.....	250				
86	St-Antoine.....	250	156	Toronto East Centre.....	250				
87	St-Denis.....	250	157	Toronto High Park.....	250				
88	St-Henri.....	250	158	Toronto Northeast.....	250	227	British Columbia		
89	St-James.....	250	159	Toronto Northwest.....	250		Cariboo (2).....	650	00
90	St-Lawrence-St-George.....	250	160	Toronto Scarborough.....	250	228	Comox-Alberni (2).....	750	00
91	St-Mary.....	250	161	Toronto South.....	250	229	Fraser Valley.....	750	00
			162	Toronto West Centre.....	250	230	Kootenay East.....	900	00
			163	Victoria.....	400	231	Kootenay West.....	900	00
			164	Waterloo North.....	225	232	Nanaimo.....	400	00
			165	Waterloo South.....	225	233	New Westminster.....	300	00
			166	Welland.....	225	234	Skeena.....	1,200	00
			167	Wellington North.....	225	235	Vancouver Burrard.....	250	00
92	Algoma East.....	900	168	Wellington South.....	225	236	Vancouver Centre.....	250	00
93	Algoma West.....	800	169	Wentworth.....	225	237	Vancouver North.....	250	00
94	Brant.....	170	170	York North.....	250	238	Vancouver South.....	250	00
95	Brantford City.....	250	171	York South.....	200	239	Victoria.....	200	00
96	Bruce North.....	225	172	York West.....	200	240	Yale.....	900	00
97	Bruce South.....	225							
98	Carleton.....	225							

## APPENDIX IV

## PROCLAMATION OF THE CENSUS

EXTRA



THE CANADA GAZETTE

PUBLISHED BY AUTHORITY

OTTAWA, FRIDAY, MAY 15, 1931

## PROCLAMATION

BESSBOROUGH

[L.S.]

CANADA

GEORGE THE FIFTH, by the Grace of God of Great Britain, Ireland and the British Dominions beyond the Seas KING, Defender of the Faith, Emperor of India.

To all to whom these Presents shall come or whom the same may in anywise concern,

GREETING:

## A PROCLAMATION

W. STUART EDWARDS } WHEREAS in and  
Deputy Minister of } by "The Act  
Justice, Canada. } Respecting the Dominion  
Bureau of Statistics, } it is amongst other  
things in effect enacted that a census of Our Dominion  
of Canada shall be taken by the Dominion Bureau  
of Statistics under the direction of Our Minister  
of Trade and Commerce of Canada on a date in the  
month of June, in the year one thousand nine hundred  
and thirty-one to be fixed by Our Governor  
General in Council;

AND WHEREAS it is therein further enacted that the details of information and procedure to be followed for the obtaining thereof, the forms to be used and the period at which, and the dates with reference to which, the census shall be taken, or statistics and information collected, whether generally or for any specified localities requiring to be exceptionally dealt with in any of these respects, shall, subject to the provisions of the said Act be such as Our Governor General in Council directs,—

AND WHEREAS it is of the utmost importance to the interests of all the people of the Dominion of Canada that this Census should be complete and accurate.

Now Know YE, that We by and with the advice of Our Privy Council for Canada, do, by this Our proclamation, hereby make known that under the law aforesaid it is the duty of every person to answer all questions on Census schedules applying to him and the family to which he belongs and to the farm occupied by him or his family, and all other Census questions as required by law, and that any person refusing to do so is subject to penalty.

## PROCLAMATION

BESSBOROUGH

[L.S.]

CANADA

GEORGE CINQ, par la Grâce de Dieu, Roi de Grande-Bretagne, d'Irlande et des Territoires Britanniques au delà des mers, Défenseur de la Foi, Empereur des Indes.

A tous ceux à qui les présentes parviendront ou qu'elles pourront concerner,—SALUT:

## PROCLAMATION

W. STUART EDWARDS } ATTENDU que dans  
Sous-ministre de la Justice, } et en vertu de la Loi  
Canada. } concernant le Bureau Fédéral  
de la Statistique, il est entre autres choses en substance statué qu'un recensement de Notre Dominion du Canada sera fait par le Bureau Fédéral de la Statistique, sous la direction de Notre ministre du Commerce, à une date dans le mois de juin de l'année mil neuf cent trente et un qui sera fixée par Notre Gouverneur général en Son Conseil;

ET ATTENDU qu'il est en plus statué, par ladite loi, que les détails d'information et la procédure à suivre pour l'obtention de telle information, les formules à employer et la période au cours de laquelle —ainsi que les dates de telle période—le recensement sera fait, ou les statistiques et renseignements recueillis, que ce soit pour le pays en général ou pour toute localité spécifiée et exigeant une procédure particulière sous le rapport de ce qui précède, doivent, sujets aux stipulations de ladite loi, être ceux ou celles que détermine Notre Gouverneur général en Son Conseil;

ET ATTENDU qu'il est de la plus haute importance et dans l'intérêt de tout le peuple du Dominion du Canada, que ce recensement soit sous tous rapports complet et exact;

SACHEZ DONC que par et avec l'avis de Notre Conseil privé pour le Canada, Nous proclamons et ordonnons qu'en vertu de la loi susdite, il est du devoir de toute personne de répondre à toutes les questions posées aux questionnaires et s'appliquant à elle-même et à la famille à laquelle elle appartient, ainsi qu'à la ferme occupée par elle ou par sa famille, et à toutes les autres questions ayant trait au re-

The sole purpose of the Census is to secure general statistical information regarding the population, agriculture, and trade of the country, and information is required from individuals only to permit the completion of such general statistics. The Census cannot be used in connection with taxation, with military or jury service, with the compulsion of school attendance, with the regulation of immigration or with the enforcement of any national, state, or municipal law or by-law. For the due protection of the rights and interests of the persons furnishing information, every officer, agent, or other person employed by the Dominion Bureau of Statistics is bound by oath under a heavy penalty to keep inviolate the information entered on the schedules or forms.

OF ALL WHICH OUR LOVING SUBJECTS and all others whom these Presents may concern, are hereby required to take notice and to govern themselves accordingly, and thereby contribute their share towards the success of this great and necessary public undertaking.

IN TESTIMONY WHEREOF, We have caused these Our Letters to be made Patent and the Great Seal of Canada to be hereunto affixed. WITNESS: Our Right Trusty and Right Well-beloved Cousin and Counsellor, Vere Brabazon, Earl of Bessborough, a Member of Our Most Honourable Privy Council, Knight Grand Cross of Our Most Distinguished Order of Saint Michael and Saint George, formerly Captain in Our Territorial Army, Governor General and Commander-in-Chief of Our Dominion of Canada.

AT OUR GOVERNMENT HOUSE, in Our City of Ottawa, this Fifteenth day of May, in the year of Our Lord one thousand nine hundred and thirty-one and in the twenty-second year of Our Reign.

By Command,

THOMAS MULVEY,  
Under-Secretary of State.

censement tel que l'exige la loi, et que toute personne refusant de s'y conformer est passible d'une peine.

Le seul but du recensement est d'obtenir des renseignements statistiques généraux concernant la population, l'agriculture et le commerce du pays, et les renseignements exigés de toute personne ne visent qu'à compléter de telles statistiques générales. Le recensement ne peut être utilisé pour le prélèvement d'impôts, pour le service militaire ou de jury, pour l'obligation quant à la fréquentation scolaire, pour la réglementation en matière d'immigration ou pour la mise en vigueur de toute loi ou règlement national, provincial ou municipal. En vue de la protection des droits et des intérêts des personnes fournissant les renseignements demandés, tout fonctionnaire, agent ou autre personne à l'emploi du Bureau Fédéral de la Statistique est tenu sous serment, sous le coup d'une peine sévère, de ne jamais divulguer les renseignements inscrits sur les questionnaires ou formules du recensement.

De ce qui précède Nos féaux sujets et tous ceux que les présentes peuvent concerner, sont par les présentes requis de prendre connaissance et d'agir en conséquence; de ce fait ils contribueront leur part au succès de cette immense et nécessaire entreprise.

EN FOI DE QUOI, Nous avons fait émettre Nos présentes lettres patentes et à icelles fait apposer le Grand Secau du Canada: TÉMOIN: Notre très fidèle et bien-aimé cousin et conseiller, Vere Brabazon, comte de Bessborough, membre de Notre très honorable Conseil privé, Chevalier grand-croix de Notre Ordre très distingué de Saint-Michel et de Saint-Georges, autrefois capitaine dans Notre armée territoriale, Gouverneur général et Commandant en chef de Notre Dominion du Canada.

A Notre Hôtel du Gouvernement, en Notre cité d'Ottawa, ce quinzième jour de mai, en l'année de Notre-Seigneur mil neuf cent trente et un et de Notre Règne la vingt-deuxième.

Par ordre,

THOMAS MULVEY,  
Sous-secrétaire d'Etat.

## APPENDIX V

## GENERAL PLAN OF COMPILATION OF THE CENSUS OF 1931

The planning of the census tables had the securing of the following primarily in view:—

1. Information known by experience to be in demand for administrative purposes, or by the public for the satisfaction of local needs, or given in past censuses and found to be of value, care to be taken to render comparisons feasible.

2. Information given by the censuses of other countries, and especially by countries similar to Canada in population structure or in political affiliations,—this information to be either comparable in form or capable of being made comparable in form with the similar information in these other countries.

3. Additional information necessary for scientific investigations, but not given in past censuses, or which special features in the Canadian situation require in addition to the information given in other countries.

The term "comparable in form" applies not only to the arrangement of the material in tables, but also to such matters as the areas, ages, etc., for which the information is given. The expression "capable of being made comparable in form" has wide implications, to which a brief reference may be in order:

Considerations of economy, limitations of space, the nature of the materials, etc., render it impossible that all data be given in the same detail or down to the same areas. This could be illustrated by numerous instances. A table of racial origins by quinquennial age groups, for example, shows few blanks for Canada as a whole, but in a table by provinces, numerous blank spaces appear, while in a table by counties the blanks are greatly multiplied. Such information might be published by small areas in thickly settled countries, but clearly is too costly in proportion to its value for Canada. Moreover, one table must not be prolific in details which another, interrelated and equally important, does not show. The best means of meeting the situation would appear to be: to give basic details down to small areas; to give fine details and cross analyses on the same subject by large areas; and where the requirements of the subject make it imperative that fine details be available by small areas, to ensure that the secondary requirements (contained under other subjects) are also given by large areas. In all cases, when the information given for small areas is aggregated, the result should be exactly comparable to the results obtained when the details of the large areas are added.

It is furthermore imperative that "lines of communication" be kept open between the different subjects tabulated, in case any unforeseen relationships be later discovered. Consequently no table can be envisaged as standing by itself. A case in point is the following: in Volume III of the Census of 1921 a number of important tables are given on children of age 7-14 in families. One table gives the children in families of widowers, another in families of widows, and another of children living with both parents. The three do not add to the total of all children of those ages, the balance being children living with other than parents. Now the latter are important, particularly in connection with school attendance, where they explain much of the non-attendance occurring in cities. Consequently it was imperative that under the subject of age elsewhere in the census, the total population in the age group 7-14 be separately given, and that under school attendance the group at this age be also given, if the information as to children not living with parents was not to be lost. Furthermore, it was imperative that in the three subjects the same areas be used, or areas capable of being aggregated to amount to the same areas, or the location of such children would have been obscured. If one subject had completely ignored the other, certain valuable residual information would have been completely missed.

In further reference to "lines of communication", it is sometimes necessary for this purpose to include in a given table material that would probably be unimportant if the table stood alone. If, for example, a table on the subject of mother tongue were completely independent, it would probably be unnecessary to include, say, ages under 5; such a table would consist of unrelated figures and would be valuable only to the curious. However, this information is an exceptionally effective check on the data on racial origins. When mother tongue (or the language commonly spoken in the home) is classified by origins, if only persons over 5 are included, there is a hiatus that cannot be bridged, for a certain race may be represented by several mother tongues and it is impossible to tell which of these is claimed for persons under 5 years of age. The subject of religion, again, is interesting not only to religious bodies, but to others as well; the churchman may not be interested in the age or racial origin aspects, but this does not apply to the vital statistician or to the student of the subject of racial origins.

In planning the compilation of the Census of 1931, the Bureau found it necessary not only to follow past planning, but also to meet new requirements. The first of the latter was to explore a set of values disclosed by certain census studies made during the past decade. Secondly, it was considered desirable to exploit to the full the advantages of the new machines recently built in the Bureau which have made possible at small cost numerous compilations previously impracticable. All available Canadian census material published and unpublished was thus taken under review and new materials planned with the object of linking the present with the past as far as possible. Since the machines automatically make records which can be filed and made available to all interested, it was felt that the compilations should not be governed by the limitations of printing, but that the existence of the complete materials might be made known by means of an analytical bibliography to be issued as supplementary to the usual census publications. This bibliography will be found in an appendix to Volume I.

The sets of values especially considered and the reasons why they were so considered cannot be described in detail here, but the following notes dealing with each of the main census rubrics will give an idea of the considerations by which the planning was guided.

1. GENERAL SURVEY OF ALL SUBJECTS COVERED BY THE CENSUS SCHEDULES.—A list of these subjects is as follows: (1) population, (2) land areas, (3) sex, (4) age, (5) conjugal condition, (6) birthplace, (7) birthplace of parents, (8) division of the population into Canadian, British and foreign born, (9) year of arrival in Canada, (10) nationality, (11) racial origin, (12) mother tongue, (13) official language spoken, (14) literacy, (15) school attendance, (16) religion, (17) dwellings, (18) families, (19) employment of wage-earners, (20) occupations and industries.

The number of the Canadian population, by individuals or groups whichever relevant, represented under each of the above subjects was clearly the first approach, as basic to all other information. It was necessary to give this under the smallest subdivisions possible to satisfy not only local needs and general administrative requirements, but for the additional purpose of localizing phenomena that might later be

revealed by cross-classification. While the information as thus given may appear in some cases unrelated, inter-relationship will often become obvious when each subject is afterwards analysed by means of cross-classification. Although these cross-classifications cannot be carried down to small areas, the relationships that they reveal if useful can be legitimately applied to the material obtained for small areas. For example, we know the number at a given age in a small area—also the number of persons by sex, birthplace, year of arrival, conjugal condition, etc. We may note that there is an unexpected number at this age in the small area. Later, we discover (by means of the cross-classification for large areas) that a certain age is predominant among male immigrants on their arrival, but conspicuously absent among married males and females. In the small area in question we find that there is a large proportion of male immigrants, together with a small proportion of married persons and a large proportion of males. To arrive at the conclusion that the number of persons at the given age is due to the fact that the small area contains a large proportion of single males and of male immigrants recently arrived, is almost as valid as if we had ascertained it directly by cross-classifying ages with other subjects in the small area. In other words, a calculation that will take a sufficient number of factors into consideration to account for the number at that age suffices for most practical purposes, while obtaining this information directly by cross-classification by small areas would not only be prohibitive in cost, but would involve a mass of tabulation that would be very difficult to handle. Thus a certain attribute A is discovered by fine analysis in a large area, such as a province. This attribute is found by similar fine analysis to be due to factors B, C and D. These factors are found to be present in small areas L, M, N, etc., which have outstanding local characteristics, e.g., of climate. Although the factors are not inter-classified for the small areas, yet their separate existence is known and if this existence is sufficient to explain the attribute in the province, it is valid to accept the explanation as satisfactory for the smaller area.

**II. CROSS-CLASSIFICATIONS.**—The next step was to cross-classify the subjects for fine analysis. It was obviously impracticable to cross-classify each subject with every other subject; a selection was therefore made of the subjects which, either because of their intrinsic importance or for special reasons based upon experiences in the matter of public or governmental demands, deserved this extensive analysis. The other subjects were cross-classified with one, two or three other subjects on similar bases. As it was impracticable to carry on this cross-classification by small areas for reasons already explained, it was necessary to decide upon areas varied enough to meet administrative requirements and to bring out general geographic features. It seemed best to have the areas uniform for all cross-classifications, except in rare cases where the peculiar demands of the subject necessitated additions. Experience had disclosed the danger of want of uniformity in areas, especially in cases where a vast amount of residual information could be deduced by the user of tables by subtraction; also because of unforeseen relationships between subjects which apparently are distinct. The areas selected thus uniformly were provinces; rural and urban (under 1,000 and over 1,000); and cities of 30,000 and over. Sex was to be differentiated through all the classifications as well as through the material given for small areas in parallel form.

The cross-classifications were planned as follows:—

(a) *Subjects Cross-Classified with every Other Subject (3 to 16 above):* Age, birthplace, origins, foreign-born naturalized and alien under and over 21, school attendance by single years for 5 to 20 and the 21-24 group, illiterates over 10 years of age.

(b) *Subjects Cross-Classified with One or More Other Subjects:* Conjugal condition with age, sex, birthplace, origins, foreign-born naturalized and alien over and under 21, illiterates.

Similarly with birthplace of parents, nationality, mother tongue, official language, religion and year of arrival.

Age, in addition to its obvious intrinsic importance and the fact that it is common to all population subjects, furnishes a link with the parallel arrangement of subjects by small areas. It is explanatory of a vast number of the attributes of these subjects; e.g. crime for males is found in larger proportions among immigrants than among native Canadians, but crime occurs predominantly at certain ages which occur more frequently among immigrants than among Canadians; if we do not know the number of the population at the ages at which crime most commonly occurs of both Canadians and immigrants we are led to wrong conclusions. The same applies to differential fertility. It is necessary therefore to have age run through all the subjects, and since the ages most immediately relevant to one subject may be different from those most relevant to another, and yet the two subjects be interrelated, it is necessary to find a common denominator that may be applied to all subjects. Such a common denominator is the quinquennial age group. Excellent methods of interpolation have been worked out, so that the single age can be deduced from the quinquennial with greater confidence in its accuracy than in that of the exact age as enumerated. Consequently, any age grouping required can be derived from the quinquennial. It is also fairly widely, and is known for small areas. The quinquennial ages of each subject can be given only for larger areas, but the one is a link with the other. Further, although it may seem absurd to give, say, the age 0-4 for some subjects, it is necessary to keep the age-grouping uniform for all the subjects to provide for hitherto unforeseen relationships, so long as it does not involve extra cost. The single age should be given as one of the "subjects," also the age "under one" should be given along with the quinquennial where at all relevant.

Although it is impracticable to give in full the reasons for the extensive cross-classification of the other subjects, a few obvious ones may be mentioned. Thus, minute information on birthplace is necessary as data linking the census with statistics of immigration as a measurement of the fluidity of Canada's population. In 1931, the population of Canada contained 2,307,525 born outside Canada and 781,770 born in provinces other than their province of residence in 1931, i.e. nearly a third of the total population. We know, for example, if these are under ten years, or if they arrived in 1921, that they were added since the last census. Examples might be given of areas to all appearances of stationary population between two censuses, and yet on investigation it is found that these areas had a large proportion (over and above children) present in the later census who were not present in the earlier, and a large proportion missing (over and above deaths) that were present in the earlier; in other words, the area had changed population. Now, this is a vastly different phenomenon from that of a stationary population, and throws out calculations made on the assumption of the latter. A stationary population is apt to have a certain age distribution, but the areas in question have not the kind of age distribution expected. Further, we find many cases of population foreign-born whose parents were Canadian-born. We accordingly wish to know their age, their degrees of illiteracy compared with the population of the countries from which they came, etc. Similar reasons could be given for all the other cross-classifications mentioned.

## APPENDIX VI.

## PERFORMANCE WITH THE PANTAGRAPH MACHINES.

It is seldom that an opportunity is afforded, outside of a psychological laboratory, to make exact measurements of human performance, especially in the type of work done in an office. Generally the performance is either of so varied a nature as to be incapable of measurement, or the human element is so intermingled with that of mechanical power that the two cannot be separated. In the operation of the pantagraph machine, however, this separation can be completely effected; all the power is supplied by the human hand and brain, so that both output and effort are capable of exact measurement.

The importance of thus taking stock of human performance and expressing it in terms whereby effort can be correlated with output, and both correlated with tests of ability, costs and many other features, can hardly be overemphasized. The standing at the examinations set by the Civil Service Commission for candidates for census clerks may unhesitatingly be accepted as excellent intelligence tests. The exact number of days and hours worked, together with the output, was carefully recorded for each clerk. All the clerks worked under the same conditions and at the same rate of pay. Any differences in the performances were due to the individual not to externals.

The work on the pantagraph machine consists of transferring facts from the census schedule to a card by means of punching a hole in the card for each fact. A full description and photograph of this card is shown on page 33. A card has to be punched for each person on the schedule, and there are over 20 facts concerning each person to be thus transferred. The performer has (1) to grasp the fact as written on the schedule, (2) to find the appropriate place on the machine, (3) to operate.<sup>1</sup> A considerable mental effort is required before the performance becomes automatic, and, of course, in some cases it never becomes automatic.

For the purposes of the following analysis of performance, records were available for 136 female clerks with little variation in age, and of mental attainments defined by the fact that they belonged to the best 1,000 selected from about 8,000 applicants for census positions by means of examinations which included not only educational but also intelligence tests. Since the percentile score of all in this selection was over 85, there was only a narrow range over which to make use of examination standing in correlation with performance; i.e., the lowest standing among the operators must be considered as above the minimum requirements for mechanical work. Most of the analysis, however, refers to the performance of 72 clerks, whose records extended over 103 days, as the remaining 64 dropped out or were transferred to other work before the 103 days were completed.

*The Learning Period.*—The learning period properly extends from the point when the first card is punched until maximum speed is attained, but as in many cases the maximum speed was not reached even in the 103 days, the period is here defined as one extending over 15 days for each clerk. In this case there are records for 136 clerks, as follows:—<sup>(2)</sup>

Day	Average number of cards punched by 136 clerks	Day	Average number of cards punched by 136 clerks
1st.....	211	10th.....	625
2nd.....	375	11th.....	631
3rd.....	408	12th.....	691
4th.....	466	13th.....	671
5th.....	487	14th.....	677
6th.....	487	15th.....	631
7th.....	576	Average 1st 5 days.....	389
8th.....	579	Average 6th-10th days.....	566
9th.....	560	Average 11th-15th days.....	640
		Average maximum speed attained (72 clerks).....	1,063

If the 72 clerks whose records extended over 103 days may be taken as a sample of the 136, the average maximum speed was 1,053, but this was a maximum extending over a month and does not represent the maximum performance for one day. Since there is no comparability here, it is not worth while separating the performance of the 72 during the first 15 days to compare with their maximum. The 1,053 is mentioned as giving an idea of the progress in learning reached in 15 days. The maximum over this period was on the 14th day, viz., 677, or two-thirds of the monthly maximum reached.

In the above table the behaviour shown from day to day is familiar to students of the learning process in psychological laboratories. The drop between the 8th and 9th, the 11th and 12th and the 14th and 15th must not be interpreted as being due to externals, such as interruptions, fewer hours, etc., as there were no such factors. The 14th (or any other day) of all did not come on the same calendar day, and absences, part time, etc., were taken into consideration. The learning process is not a steadily advancing process, but is known to proceed irregularly. This is due to causes too many to enumerate. Roughly the rate of increase in speed from, say, the 3rd day to the 13th day was 25-1 cards a day. If this were a steady rate, a maximum of 1,053 cards could be reached in 33 days, but the process slows up progressively so that in many cases the maximum was not reached in 103 days.

<sup>1</sup> In operating, speed is gained not only by the mechanical aptitude of the hand and brain but also by the mental powers of memorising and retaining the facts to be transferred.

<sup>(2)</sup> The figures refer to the number of cards punched accurately. The loss of time due to inaccuracy is charged against the operator.

The above refers to an average of 136. The individual records behave generally in the same way, but there is a wider variation in individual performance. Thus on the first day the smallest number of cards punched was 10, the largest 613; on the 14th day the smallest number was 369, the largest 1,100; but the clerk who punched 10 on the first day punched 685 on the 14th; the clerk who punched 613 on the first recorded 828 on the 14th.

In a short memorandum an exhaustive analysis of the data cannot be attempted; consequently attention is confined to certain objectives, which may be described by the following questions:—

- (1) How far is the initial performance indicative of (a) the maximum performance, and (b) the total output during the time employed; i.e., how far can the value of the operator be judged by her performance at the start?
- (2) Does training eliminate or increase the difference in performance as between individual operators?
- (3) Is the operator who reaches the highest maximum also the one who ranks highest for steady performance in the long run?
- (4) Is there any connection between performance on the pantagraph machines and standing in examinations (general education and intelligence tests) on entering?
- (5) How long does it take to train the operator?
- (6) What is the cost of training in terms of output? i.e., how far is efficiency interfered with by bringing in new operators at the beginning of each job?
- (7) Is the average output a real average of the body of operators engaged, or is it a case of exceptionally good operators doing the work of the exceptionally poor?

1. *Initial Speed.*—This speed is defined as the performance during the first five days; the individual performance during the first day covered so wide a range that it did not seem a real test, though performance during the first day will be shown. It was not always possible to ascertain whether the operator had previous training on key punching, but in no case was the operator familiar with the pantagraph machine, this machine being used only for census purposes; thus the only advantage from experience one clerk could have over another was familiarity with transferring information from schedules to cards. In the case of Hollerith Machines of the older type this is done by key punching with the fingers; the punch has only ten keys, numbered from 0 to 9 and one marked "x". The pantagraph on the other hand is a duplicate of the card and is worked by arm movement, not by the fingers.

The performance during the first day showed an average of 211 cards for 136 clerks. The average speed (by the 72 clerks who completed 103 days' work) over the first five days was 391 cards. The progress over the remaining periods is shown in the following table.

TABLE 2.—INITIAL SPEED OF 72 OPERATORS COMPARED WITH MAXIMUM SPEED IN 103 DAYS AND AVERAGE OUTPUT DURING VARIOUS PERIODS

Range of initial speed*	Average initial speed	Maximum 103 days	Average 81 days	Average 103 days	Average 16-37 days	Average 38-59 days	Average 60-81 days	Average 82-103 days
1. 185-281.....	246	941	704	753	757	743	819	934
2. 288-336.....	310	962	737	789	760	797	791	921
3. 336-354.....	345	987	770	811	791	832	885	964
4. 356-384.....	368	1,077	823	868	841	890	954	1,039
5. 390-421.....	406	1,033	807	849	856	775	968	992
6. 425-451.....	434	1,083	833	895	889	803	887	1,074
7. 458-491.....	476	1,094	822	875	861	913	868	1,070
8. 492-616.....	548	1,243	956	1,017	1,006	1,093	965	1,242

\* 9 persons in each group.

It is quite clear that the initial speed is indicative of future performance; it is equally clear that it is not an absolutely certain criterion. The extent to which it is a criterion can be measured by means of correlation. The initial speed of the 72 clerks was correlated with the maximum speed reached within 103 days. Any difference between the individuals on the score of intelligence, so far as this was indicated by examination order, was eliminated. Previous training as determining the initial speed could not be eliminated, but the fact that maximum speed was reached well within the 103 days, also the consideration that no one could have had previous experience with this particular type of machine, largely eliminated this difficulty. The correlation was only .50. The full interpretation of this measurement is complicated and confusing, but the following would meet with agreement among statisticians: the maximum speed was controlled by the initial speed to the extent of 25 per cent (the square of .50). The practical issue that arises is whether this control is sufficiently strong to determine policy in selecting the operators objectively. The answer would seem to be that if there was an unlimited number to select from and if the process of selection involved no time or expense, the initial speed would be some consideration. As it is, it is doubtful whether the results of a test of speed at the beginning of training is of any value as a prediction of the possibilities of the candidate, providing the candidate has already been selected by other means. In an examination of untrained operators which included (among tests on general education, etc.) speed on machine operating, this speed test might probably be given a weight of 25 per cent. If the test was set to procure evidence of training the matter would be different; but it is remarkable that there is no clear evidence of any contribution by previous training to the value of the 72 operators during the 103 days. This was measured by the total output, which correlated with the initial speed only to the extent already mentioned in the case of the maximum speed. The effects of any previous training (if there was any such training), were speedily lost in individual differences. The belief is expressed here that no objective test is as good as the judgment of the trained and experienced supervisor in selecting the operators.

2. Does training eliminate or increase the difference in performance as between individual operators?—The measurement of individual difference is the standard deviation. In order to reduce the measurement to a common denominator as between different series, we shall here use the term "spread", meaning the standard deviation expressed as a percentage of the average performance. The spread in the 72 subjects at various stages of the 103 days was as follows:—

1st day.....	64.26	Average 38-59th day.....	20.90
Average 1st 5 days.....	23.61	Average 60-81st day.....	19.03
14th day.....	22.41	Average 82-103rd day.....	18.13
Average 16-37th day.....	16.94	Maximum.....	16.69

Taking the initial performance as the average over the first five days, it is seen that, so far as can be judged by the sample of 72, a good deal of uniformity as between operators was effected by training; i.e., the spread was reduced from 23.61 to about 17 or by about 25 per cent. However, it is seen that the reduction was speedily accomplished, i.e., in about 22 days. The answer to the question, then, would seem to be that training eliminates individual differences up to a point only; individuality remains the predominant factor probably throughout.

3. Is the operator who reaches the highest maximum speed also the most reliable for steady performance in the long run? To answer this question the maximum speed was correlated with the average speed over 103 days. This latter multiplied by 103 equals, of course, the total output. The time lost at the start affected this average speed, so that this initial handicap had to be overcome. The correlation was .91. Interpreting this as before, the maximum speed controlled the average speed to the extent of 83 per cent, a remarkably high correlation. Judging from the experience with the 72 operators, the clerk who is capable of reaching a high rate of speed is, on the whole, also the one who does the steadiest work. Thus, in selecting trained operators objectively the speed test would probably deserve a weight of 83 per cent.

4. Is there any connection between performance on the pantagraph machine and standing on examinations of the candidate applying for census positions (general education and intelligence tests)? To obtain an answer to this question the maximum speed was correlated conjointly and severally with initial speed and examination order. The results were nil; i.e., there was no evidence of correlation between final speed and examination standing. This negative result was perhaps to be expected. The clerks accepted came in the first thousand of about eight thousand; i.e., they all had a percentile score of about 85. If the 72 were taken at random over the whole range of 8,000 candidates it is probable that a correlation might have been shown. The following table shows the performance throughout of the 72 candidates in their examination order. There was no connection whatever between examination order and initial speed. It may or may not be significant that the four who stood highest in examination order also showed the best average over 103 days, and that the very lowest in examination order showed a low average. However, the negative results alone are important. In so far as the 72 are a cross-section of the universe, it is clear that the dictum of general ability and education being a handicap to mechanical performance is exploded.<sup>1</sup>

TABLE 3—PERFORMANCE OF 72 CANDIDATES OVER 103 DAYS ACCORDING TO INTERVALS OF EXAMINATION ORDER

Examination order interval	Number of cases	Average examination order	Initial speed	Maximum 103 days	Average 81 days	Average 103 days	Average 16-37 days	Average 38-59 days	Average 60-81 days	Average 82-103 days
Under 100.....	2	27	426	1,188	949	970	984	944	1,188	1,047
100-200.....	2	123	343	1,116	857	912	927	1,022	872	1,116
200-300.....	9	238	427	1,045	804	856	858	921	797	1,042
300-400.....	7	344	309	913	717	753	753	713	858	887
400-500.....	8	447	303	1,000	767	811	848	767	853	974
500-600.....	9	537	305	1,006	758	827	818	818	853	993
600-700.....	4	651	411	1,024	800	846	802	808	921	1,014
700-800.....	11	731	412	1,135	871	918	901	929	1,006	1,087
800-900.....	10	844	392	1,078	794	853	824	901	853	1,066
900-1,000.....	9	937	394	1,108	834	888	853	905	937	1,091
1,000.....	1	1,000	517	994	796	814	797	872	745	994
General average.....	72	581	391	1,053	804	854	846	867	894	1,030

5. How long does it take to train the operator? This question is probably incapable of an adequate answer within the scope of this article. The individual differences are enormous; further, it would be necessary to know each individual's daily performance over a period of 103 days at least. The following figures, however, are a certain indication.

	Difference
Average speed over 103 days.....	854
Average maximum speed.....	1,053
Average initial speed.....	391
Average speed 14th day.....	677
" 27th (about).....	846
" 49th ".....	867
" 70th ".....	894
" 92nd ".....	1,030
	136

<sup>1</sup> It will be of interest to mention here that, owing to the depression, the applicants for census positions were from a very large variety not only of individual types, but also of classes and occupations including even professional people. As already stated the selection was made from the best 1,000 out of 8,000 applicants.

The general average was reached on or before the 40th day, while the maximum speed was in some cases not reached within the time limit set. Possibly the best way of expressing the situation is that they reached within two-thirds of their maximum in 14 days and that 40 days training (or about six or seven weeks) was rather more than necessary. It is clear, however, that the operator showed her fitness or unfitness well within the first month.

6. *What is the cost of training in terms of average output?* This is an attempt to answer the question "how far is efficiency interfered with by bringing in new operators at the beginning of each job?" This question can be answered from the data already supplied. A completely accurate answer would need a good deal of calculation, and a sample of 72 operators working 103 days is perhaps not sufficient for the purpose. However the following table will be of interest:

Each day's share = Average over 103 days.....	854 cards
Number of days' work in the first 15 days.....	9.34 days
" " " 37 ".....	31.13 "
" " " 59 ".....	53.47 "
" " " 81 ".....	76.50 "
" " " 103 ".....	103.00 "
Number of days' work per day in 1st 15 days.....	0.62
" " " 16-37 ".....	0.99
" " " 38-59 ".....	1.02
" " " 60-81 ".....	1.05
" " " 81-103 ".....	1.21

Thus one day's work of the fully trained was equivalent to two days' work of the first 15 days. It is not worth while going into more elaborate measurements with the material available, but there is a point here which can be compared with the results of the next inquiry.

7. *Is the average output a real average of the body of operators engaged, or is it a case of the exceptionally good operators offsetting the exceptionally poor?* Arranging the 72 operators in 8 groups of 9 each in order, from those who did the most to those who did the least, the proper share of each of these groups was 12.5 per cent of the total. The record of their actual work was as follows:—

One share = 12.5 p.c. of total

9 did 9,822 cards per day or 15.0 per cent of total or .....	1.28 shares
9 " 8,606 " " " 14.0 " " " .....	1.120 "
9 " 8,228 " " " 13.0 " " " .....	1.040 "
9 " 7,838 " " " 12.7 " " " .....	1.016 "
9 " 7,547 " " " 12.2 " " " .....	0.976 "
9 " 7,063 " " " 11.5 " " " .....	0.920 "
9 " 6,644 " " " 10.8 " " " .....	0.864 "
9 " 5,932 " " " 9.6 " " " .....	0.768 "

72 61,680

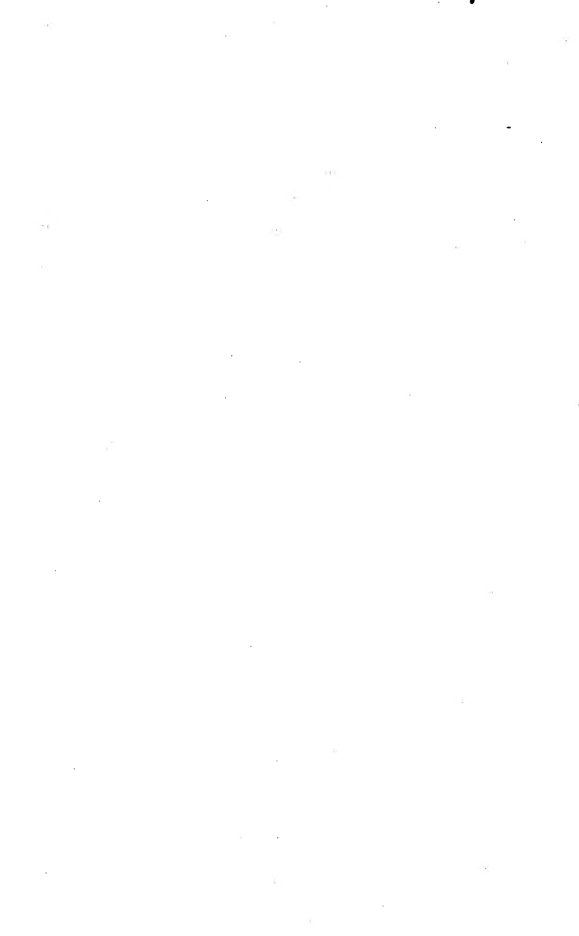
The first quarter did 30.0 per cent of the work or 1.20 times their share.

The last quarter did.. 24.4 " " 0.816 "

The middle half did.. 49.6 " " 0.991 "

Thus the individual difference between operators was at least as important as the difference between the trained and untrained. The moral of this would seem to be that the selection of the individual is more important than the fact whether or not she is trained. It is important to notice that this applies only to the extremes—the best and the poorest. The middle half did not show great individual differences; on the other hand the difference between the highest eighth and the lowest is great. It would seem to be less costly to put the poorest nine on other work and train new operators in their place than to retain them even after training. The value of the judgment of the experienced supervisor has indirectly appeared at various points of this study; this value can hardly be over emphasized.







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